

Central Point Natural Hazard Mitigation Plan

2020 COMPREHENSIVE UPDATE

CENTRAL POINT NATURAL HAZARDS STEERING COMMITTEE

Comments, suggestions, corrections, and additions are encouraged to be submitted from all interested parties.

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1 Introduction

The City of Central Point is subject to a wide array of natural hazards. Although the occurrence and severity of hazards has been historically limited, the City has experienced winter storms, floods and an increasing incidence of wildfires. Hazard mitigation planning is important to understand the characteristics of potential hazards, risks to people, buildings, infrastructure and property and what actions can be taken to lessen exposure to the identified risks before a disaster events occurs.

The 2020 Central Point Natural Hazard Mitigation Plan (NHMP) updates the City's original NHMP approved in 2011. Periodic re-evaluation of the NHMP is conducted every 5-years in accordance with the Federal Emergency Management Agency (FEMA) *Local Mitigation Planning Handbook*. Regular updates to the NHMP are important to assure that the mitigation strategies account for changes in the community as growth occurs and new information is available about hazards and mitigation best practices. It also helps to assure that the mitigation strategies align with the Community vision, values and resource availability.

Hazard Mitigation is defined as "Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards."

By keeping the NHMP updated every 5-years, the City of Central Point is eligible to receive non-emergency related disaster funding sources through FEMA, including the following Hazard Mitigation Grant Assistance Programs:

- Hazard Mitigation Grant Program (HMGP) - Assists in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration.
- Flood Mitigation Assistance (FMA) Program – Provides funds annually for flood hazard mitigation and planning.
- Pre-Disaster Mitigation (PDM) Program – Provides funds annually for hazard mitigation planning and projects.

- HMGP Post Fire Grant – Assistance to help communities implement hazard mitigation measures after wildfire disasters.
- Building Resilient Infrastructure Communities (BRIC) – Supports states, local communities, tribes and territories undertake hazard mitigation projects, reducing the risks from disasters and natural hazards.

Access to these resources can be critical in leveraging limited resources to help protect people and property in Central Point. Additionally NHMP planning implementation helps the City keep flood insurance premiums lower community-wide through the National Flood Insurance Program (NFIP) Community Rating System (CRS).

1.1 Scope

The 2020 NHMP assesses natural hazards and community vulnerability within the city limits and urban growth boundary (UGB) (Figure 1). Since the 2011 NHMP was approved, the City has initiated an application to add roughly 444 acres to the UGB for housing, non-industrial employment, parks and open space and associated public facilities (Figure 2). Although the UGB Amendment has not been approved at this time, the preliminary boundaries are shown here because the mitigation strategies to reduce wildfire risk, particularly along the Bear Creek Greenway for example, will apply pending approval of the UGB Amendment.

1.2 2020 Update Highlights

The 2020 Central Point NHMP is based on a comprehensive review 2011 plan. The risk assessment is based on new hazard data, changes in development patterns and changes in risks to the community. The NHMP update also considers mitigation efforts undertaken per the 2011 plan, along with changes to the City's capabilities to identify new and revised efforts to minimize the impacts of hazards on the community. Noteworthy changes to the community and priorities for the 2020 NHMP include:

- New development – Since 2011, the City has added 706 new housing units and over 200,000 square feet and 75,000 square feet of commercial and light industrial building area.
- Strategic Plan Update – The City's Strategic Plan provides the overarching vision, mission, values and goals that articulate the community's preferred future and guide the City as it grows over the next 20-years.
- Flood Map Revision – In 2016, FEMA approved a Letter of Map Amendment revising flood zones within the Twin Creeks Master Plan area. The net impact of this changes was removal of all structures from the regulatory floodway and a reduction of the Special Flood Hazard Area (1% annual chance floodplain).
- Urban Fire Incidence Increase – The City experienced two (2) wildfires ignited along the Bear Creek Greenway in 2018 and in 2020. Each fire decimated portions of the Greenway, and either threatened, damaged or destroyed structures as the fire spread. Although Central Point was spared the devastation experienced in Talent and Phoenix in 2020, both events brought into sharp focus the reality that all of Central Point is at risk from wildfire hazards and that the

frequency and severity of impacts necessitate elevating this hazard and mitigation actions to a priority level.

- Mitigation Stakeholder Changes – There have been staffing changes among the mitigation stakeholders due to retirements, new hires and position changes. During the update process, new members to the stakeholder team were convened as part of the plan review, hazard and risk assessments and mitigation strategy update. This helps to keep stakeholders informed and engaged in mitigation planning and implementation efforts.

The updated NHMP for the City will help guide and coordinate mitigation and decision making for local land use policy in the future. By committing to proactive mitigation planning and consistent implementation activities, the City aims to reduce the cost of disaster response and recovery, avoid loss of life and injury and ultimately create a safer and more disaster resilient community.

1.3 Acknowledgement of Participants

The City of Central Point would like to thank the many individuals and organizations that participated in the development of the City's Natural Hazard Mitigation Plan 2020 update. The diversity of experience and perspectives provided a resource for prioritizing the City's natural hazards, their potential impacts on the community, and practical actions to mitigate those hazards.

Steering Committee

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1.4 Plan Organization

The City of Central Point Multi-Hazard Mitigation Plan is organized as follows:

- Chapter 1: Introduction
- Chapter 2: Community Profile
- Chapter 3: Planning Process
- Chapter 4: Risk Assessment
- Chapter 5: Mitigation Strategy
- Chapter 6: Plan Implementation and Maintenance
- Appendix A – Adoption Resolution
- Appendix B – Resources & References
- Appendix C – Planning Process & Public Participation Documentation
- Appendix D– Critical Facilities

Figure 1.1: Acknowledged UGB

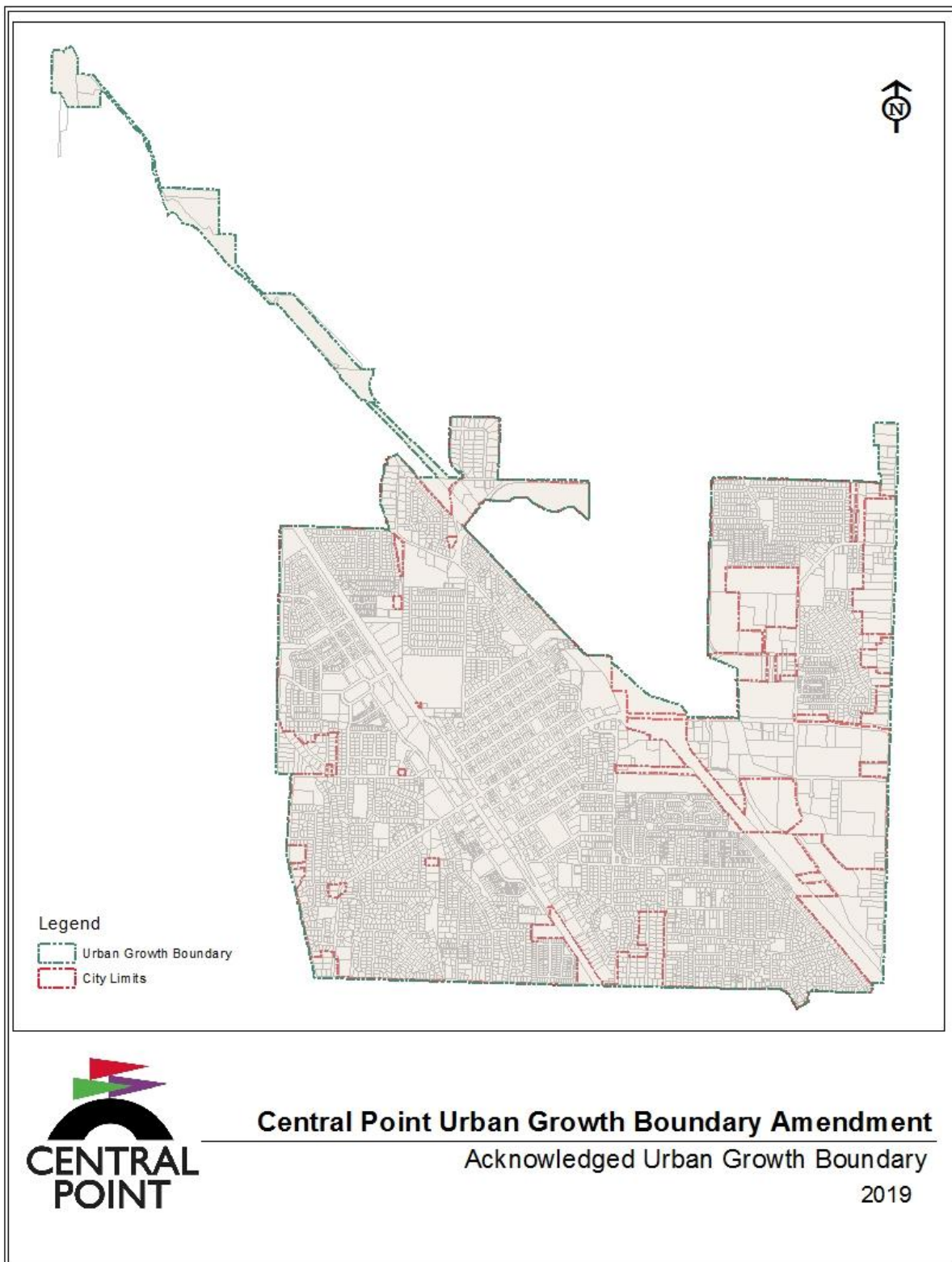
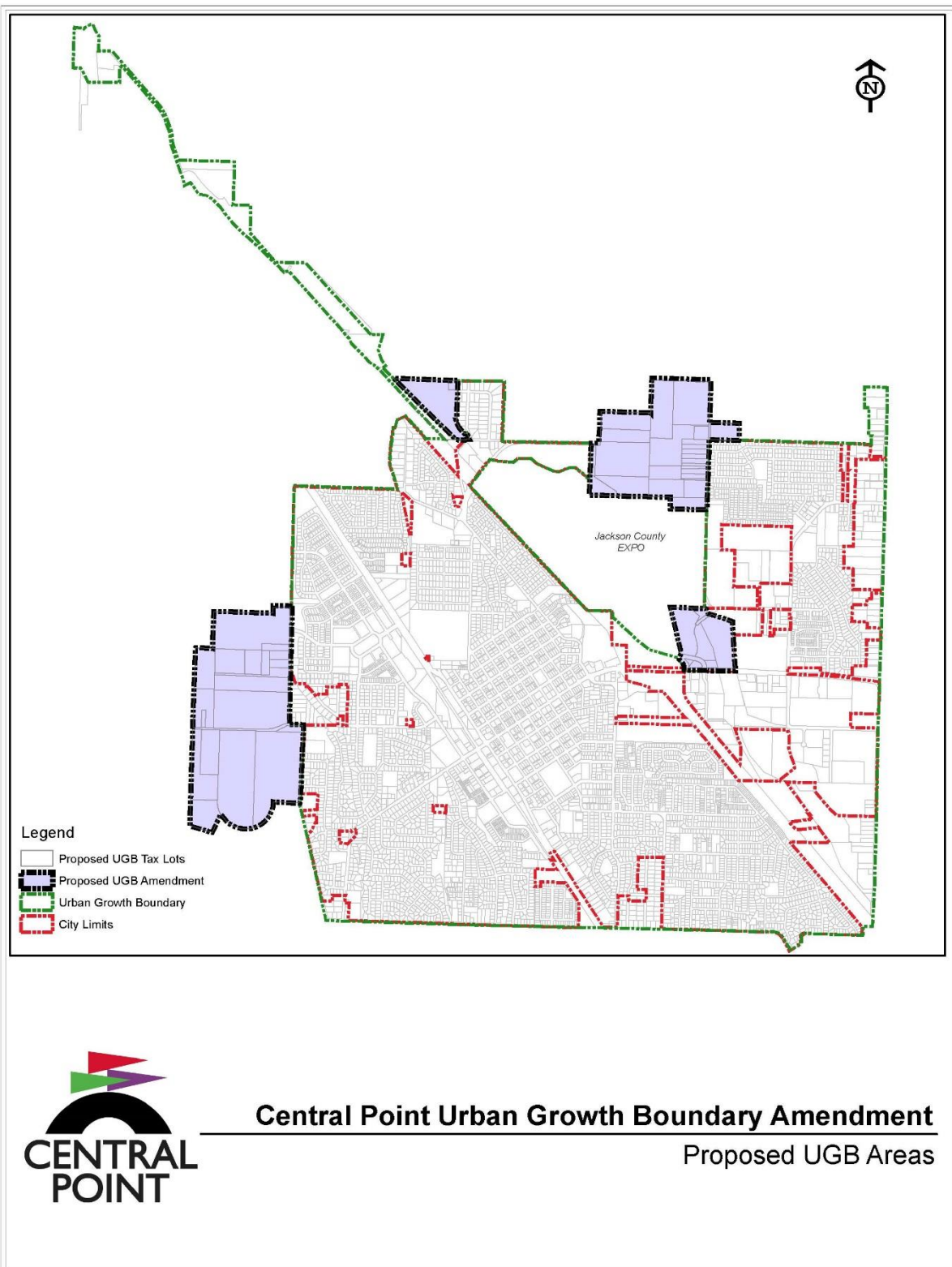


Figure 1.2: Proposed UGB Areas



2 Central Point Community Profile

2.1 Introduction

The community profile provides information on the unique natural, social, and economic characteristics of Central Point. Incorporated in 1889, the city is located in the “central point” of the Rogue Valley and served as an important hub early on for commerce and transportation in the valley, providing connection between the local resources and products to outside areas. Roughly midway between San Francisco, to the South, and Portland, to the North, Central Point continues to serve as a link between the Rogue Valley, and the rest of the Pacific Northwest.

2.2 Geography and Climate

Central Point is located in the Rogue Valley, near the confluence of Bear Creek with the Rogue River. The topography in the City is generally flat with an overall elevation of approximately 1,200 feet above sea level. The Rogue Valley is surrounded by mountains, including the Siskiyou to the south, Cascades to the east, and the Coast Range and Umpqua Divide to the west and north.

According to the Koppen Climate Classification, Central Point and the Rogue Valley experience a “warm summer Mediterranean Climate.”¹ This climate is characterized by warm, dry summers and cool, wet winters. The higher summer temperatures and lower rainfall are directly attributable to the surrounding mountains creating a “rain shadow” for the City and the Rogue Valley. Rainfall occurs primarily in the winter months, which can be chilly with temperatures dropping near or below freezing, with occasional snow fall on the valley floor.

Climate Change

According to the *2015 Oregon Natural Hazards Mitigation Plan*,

The most reliable information on climate change to date is at the state level. The state information indicates that hazards projected to be impacted by climate change in Region 4 include drought, wildfire, flooding, and landslides. Climate models project warmer drier summers and a decline in mean summer precipitation for Oregon. Coupled with projected decreases in mountain snowpack due to warmer winter temperatures, all eight regions are expected to be affected by increased incidences of drought and wildfire. In addition, flooding and landslides are projected to occur more frequently throughout western Oregon. An increase in extreme precipitation is projected for some areas in Region 4 and could result in a greater risk of flooding characterized by increased magnitude and shorter return intervals in certain basins. Landslides in Oregon are strongly correlated with rainfall, so increased rainfall — particularly extreme events — will likely trigger more landslides. While winter storms and windstorms affect Region 4, there is little research on how climate change influences these hazards in the Pacific Northwest (2015)²

The 2020 update to the plan does not consider climate change separately; but instead focuses on how the risks have changed over time since the previous plan was completed. Chapter 4 – Hazard Identification and Risk Assessment takes into consideration changes to development patterns,

¹ Central Point, Oregon. (n.d.). In Wikipedia. Retrieved July 13, 2020, from http://en.wikipedia.org/wiki/Central_Point%2C_Oregon

² Oregon Department of Land Conservation and Development (DLCD), Oregon Natural Hazards Mitigation Plan, 2015.

population shifts, areas impacted by recent hazards, and new data on the hazards that affect Central Point.

2.3 History

The settlement of Central Point and the Rogue Valley was influenced by the availability of the natural resources to the people who have called it home. Central Point and the Rogue Valley were first home to Native Americans, primarily by the Takelma, Latgawas, and Shasta, who camped, fished, and hunted along the streams and rivers³. Europeans first began to explore the valley in search of furs, followed soon after by pioneers that established the Applegate Trail, a safer alternative to the Oregon Trail⁴. With the discovery of gold in Jacksonville along with the Oregon Donation Land Act in 1850, permanent settlements were established in the valley⁵.

First settled in 1852, Central Point was located at a major crossroads connecting the mining and timber areas of Jackson County with the Oregon-California Trail that traversed the valley north and south. The original town center was located near present-day Interstate 5, but was relocated a ½-mile to the west when the tracks of the Oregon-California Railroad bypassed the town in 1883.

According to an article in the Oregon Encyclopedia:

Central Point was incorporated in 1889. A year later, the town had 534 residents and had built a city hall on Pine and Third Streets. Matthias Welch built a flour mill on Front Street in 1892, which saved local farmers a trip to Medford. By 1910, the 761 people who lived in Central Point had electricity, paved streets and sidewalks, city water and sewers, a YMCA, a city hall, a fire station, a library, and a brick schoolhouse⁶.

With the increasing importance of agriculture, especially the nearby orchards, Central Point's location in the valley provided a key connection between the fields and markets. After a brief stagnation between the beginning and end of WWI, Central Point began to grow in the 1920's when US Highway 99 was completed, bringing travelers and tourists through the valley. The opening of Camp White prior to WWII and the need for lumber to construct barracks and other buildings keep the lumber mills in town busy. Following the War, the mills kept running for another 40 years until a sharp decline in the 1980's brought on by an economic recession and the spotted owl endangered species concerns.

Today, Central Point still benefits from its location near the center of the Rogue Valley providing a connection for the surrounding agricultural producers, including vineyards and orchards, to the local markets and Interstate-5 that connects the valley to outside markets. The wine industry, cultural resources, and eco-tourism keep a steady stream of visitors and in-migration of new residents to Central Point.

³ Mullaly, A. (n.d.). Central Point. The Oregon Encyclopedia. Retrieved July 15, 2020, from https://oregonencyclopedia.org/articles/central_point/#.XzHDbyhKiUk.

⁴ Applegate-Sargent, A. (1921). A Sketch of the Rogue River Valley. The Quarterly of the Oregon Historical Society. 22, 1-11.

⁵ LaLande, J. (n.d.). Bear Creek Valley. The Oregon Encyclopedia. Retrieved July 16, 2020, from https://oregonencyclopedia.org/articles/bear_creek_valley/#.XzHD3ihKiUk.

⁶ Mullaly, A. (n.d.). Central Point. The Oregon Encyclopedia. Retrieved July 15, 2020, from https://oregonencyclopedia.org/articles/central_point/#.XzHDbyhKiUk.

2.4 Economy

As noted in the City's Economic Element⁷:

Between the 1960s and 1970s, the City of Central Point rapidly expanded its residential development. Because there was no corresponding development of commercial and industrial industries, Central Point became a residential community largely inhabited by people who commuted to nearby cities for work. During this period the forest products industry grew, and residents of Central Point were able to find employment at the mills in Medford and White City.

Despite the historic reliance on trade and resource-based industries, Central Point has been successful in diversifying the City's economy. There has been retail and industrial growth around Exit 33 on Interstate 5, including a new Costco Wholesale store. The artisan corridor along Hwy 99 hosts newer retailers alongside long-time specialty food producers including the Rogue Creamery, which originally opened in the 1930's, Lillie Belle Farms chocolates and a wine tasting room.

Prior to the pandemic and subsequent shutdown of the economy in early 2020, the state and local economy were doing well, with a growing GDP and recovering, albeit slowly, from the Great Recession (December 2007 – June 2009). As highlighted by the sudden onset of the pandemic, and noted in the Economic Element, future economic conditions cannot be accurately predicted and the long-term effects of the pandemic remain to be seen.

2.5 Demographics

The population of Central Point has grown steadily from 547 people counted in the 1890 Census, shortly after the City's founding, to an estimated 19,101 people in 2019⁸. Central Point is currently the third largest city in Jackson County. The population growth rate has slowed from the approximate annual growth rate (AAGR) of 6.6% between 1990 and 2000, when the City grew by 5,000 people. Following the Great Recession, the City experienced a significant slowdown in population growth with an AAGR that dropped below 1%⁹.

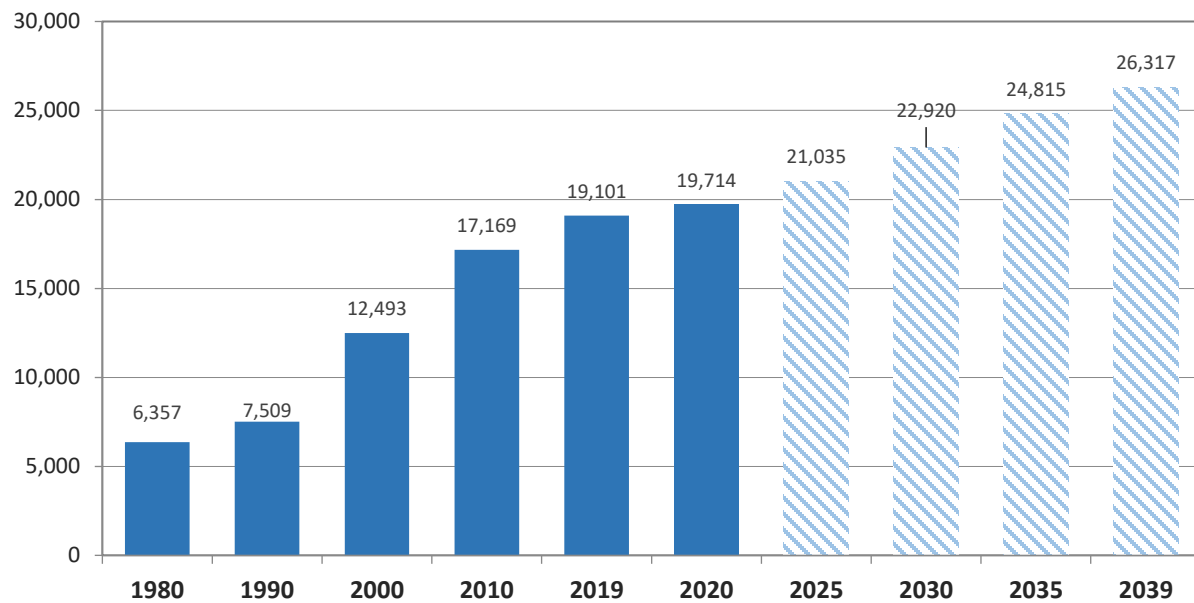
The population forecast projects continued growth over the coming 20 years. It estimates the population of the urban area will grow to 23,662 people by 2032 and 26,317 by 2039. This growth represents a 37% increase in total population between 2019 and 2039 and an Average Annual Growth Rate of 1.5 percent.

⁷ Economic Element, City of Central Point Comprehensive Plan, Ordinance No. 2059, July 11, 2019.

⁸ Coordinated Population Forecast for Jackson County, its Urban Growth Boundaries (UGB), and Area Outside UGBs 2018-2068, Population Research Center, College of Urban and Public Affairs, Portland State University; June 30, 2018.

⁹ Population Element, City of Central Point Comprehensive Plan, Ordinance No. 2052, March 14, 2019.

Figure 2-1: Population Change – 1980 – 2039



Source: 2018 PRC Coordinated Population Forecast, Jackson County

2.6 Community Development & Land Use

Although the Central Point continues to grow, sometimes at an accelerated rate, the City has been able to maintain public services, provide adequate support infrastructure, and a highly livable community. Through a proactive planning approach, such as increasing densities on residential lands, promoting more diverse housing types, and providing live-work opportunities in a Transit Oriented Development (TOD) district, the City was able to sustain growth and continue the efficient use of land. However, the supply of lands within the urban limits has not kept pace with the projected needs.

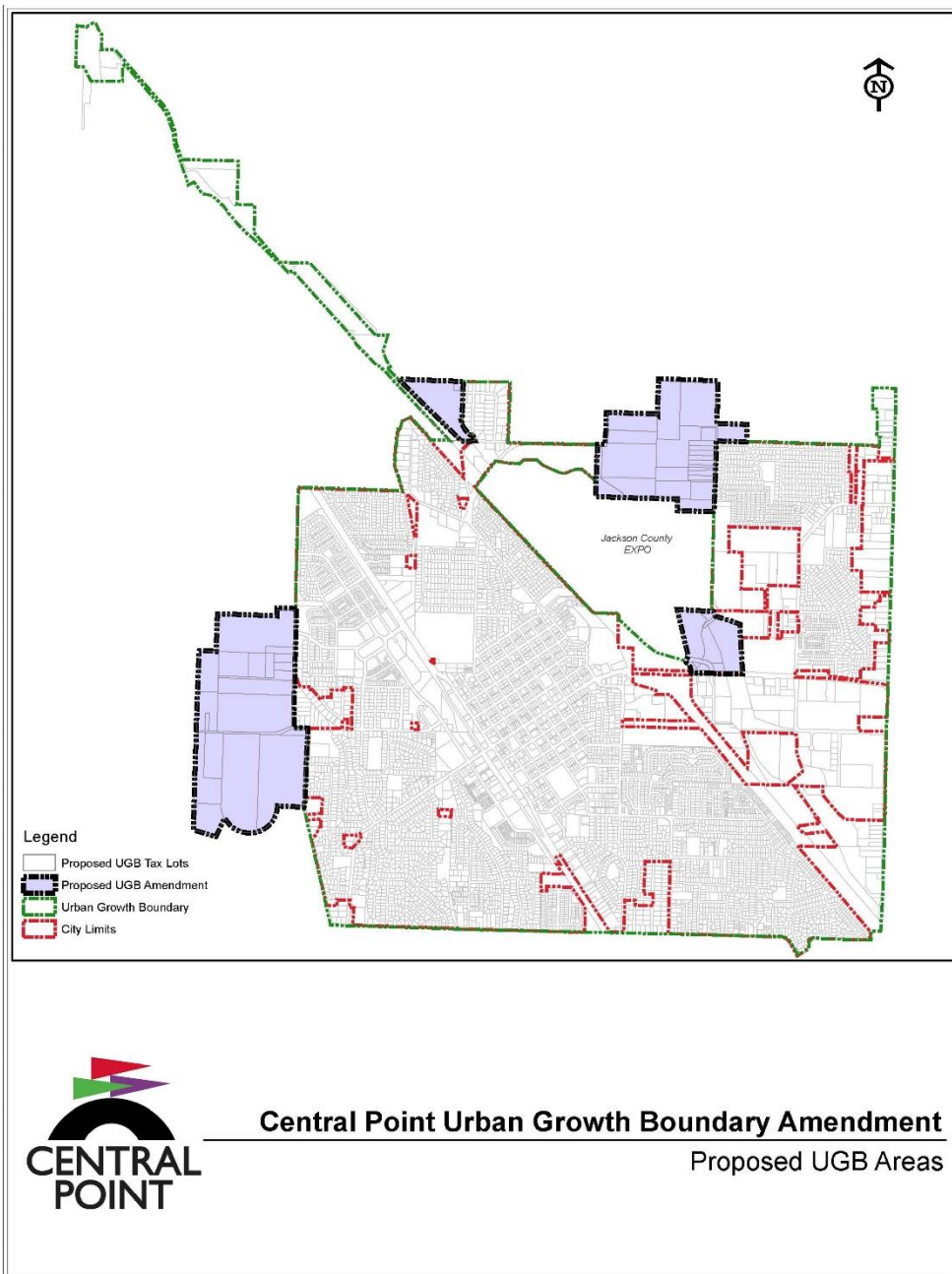
The City's urban area encompasses approximately 3,100 acres. Based on the most recent analysis of land needs, the City's forecast population growth for the 2019-2039 planning period requires more land for housing, jobs, and parks than is available in the current UGB. As of July 2020, the City is preparing a major UGB amendment to add approximately 444 acres of land to the existing UGB to accommodate the expected population growth and land use needs across the City. Given the City's efforts to increase land use efficiency over the years, there is little opportunity to further extend the life of the current UGB to accommodate the 20-year land need¹⁰.

The City's UGB amendment aims to provide a sufficient inventory of land that will allow the City to continue to grow and provide the services and amenities that residents have come to expect, including a diversity of housing opportunities, financial incentives, while maintaining a "small town character"¹¹.

¹⁰ City of Central Point, Urban Growth Boundary Amendment for the Planning Period 2019-2039.

¹¹ *ibid*

Figure 2-2: Proposed Urban Growth Boundary Expansion Areas.



3 Planning Process

Requirements 44 CFR §201.6(b) and §201.6(c)(1):

An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- 1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;*
- 2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process; and*
- 3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

3.1 Background

The City's current Natural Hazard Mitigation Plan (NHMP) was prepared in 2011, the first stand-alone hazard mitigation plan for Central Point. Since the development of that plan, FEMA guidance for local hazard mitigation plans has been refined and updated. For example, communities are required their mitigation plans every five years to reflect changes in development, progress in mitigation efforts, changes in community priorities, and to remain eligible for Pre-Disaster Mitigation (PDM) program funding, Flood Mitigation Assistance (FMA) program funding, and Hazard Grant Mitigation Program (HGMP) funding.

The 2020 update to the NHMP involves a comprehensive review and update of the existing plan. As part of this plan update, all sections of the plan were reviewed and updated to reflect new data on hazards, changes in risks, changes in development patterns, capabilities of the City's mitigation efforts, participating stakeholders, and revised mitigation strategies. The update was prepared in collaboration with city residents, the Citizens Advisory Committee, the Planning Commission and the City Council.

3.2 Planning Process

The planning process for updating the City's plan uses planning requirements from the Disaster Mitigation Act of 2000 (DMA), along with FEMA's associated guidance. The *Local Mitigation Planning Handbook*¹² recommends using four phases that are broken down into nine tasks. Each task represents an important step in guiding the planning process to represent the City's current needs.

The updated plan will be used for compliance with the Floodplain Management Planning requirements from FEMA's Community Rating System (CRS). In order to receive credit in this program, the NHMP must follow the CRS 10-step program. The 10 steps are also aligned with the four phases of mitigation planning. Table 3.1 summarizes the steps used in the planning process, how they align with the four guiding principles of mitigation planning, and the location of that information in the updated plan.

¹² Federal Emergency Management Agency. *Local Mitigation Planning Handbook*, 2013. 1-3.

Table 3.1: Mitigation Planning Process

FEMA 4 Phase Guidance	FEMA Local Mitigation Planning Handbook	CRS Planning Steps Activity 510	Central Point 2020 Update (chapters)
Phase I: Organize Resources	Task 1: Determine the Planning Area & Resources	Step 1: Organize Resources	Chapters 1, 2 & 3. Introduction, Community Profile, Planning Process
	Task 2: Building the Planning Team		Chapter 3. Planning Process
	Task 3: Create an Outreach Strategy	Step 2: Involve the Public	Chapter 3. Planning Process
	Task 4: Review Community Capabilities	Step 3. Coordinate with other Agencies	Chapter 3, Chapter 4. Planning Process & Hazard identification
Phase II: Assess Risks	Task 5: Conduct a Risk Assessment	Step 4. Assess the Hazard	Chapter 4. Hazard Identification & Risk Assessment
		Step 5. Assess the Problem	
Phase III: Develop the Mitigation Strategy	Task 6: Develop a Mitigation Strategy	Step 6. Set goals	Chapter 5. Mitigation Strategy
		Step 7. Review Possible Activities	
		Step 8. Draft an Action Plan	
Phase IV: Adopt and Implement the Plan	Task 7: Keep the Plan Current	Step 9. Adopt the Plan	Appendix A. Plan Adoption
	Task 8: Review and Adopt the Plan	Step 10. Implement, Evaluate, Revise	Chapter 6. Plan Implementation & Maintenance
	Task 9: Create a Safe and Resilient Community		

3.2.1 Phase 1: Organize Resources

The first phase of the 2020 NHMP update ensures that all the necessary resources are identified and in place. Resources are the people, places and things needed to provide direction on good decisions for preparing for and responding to a natural hazard.

3.2.1.1 Task 1. Determine the Planning Area and Organize the Planning Effort

The planning area for the 2020 NHMP update includes the City's urban area, which encompasses approximately 3,100 acres of land. As of July 2020, the City is preparing a major Urban Growth Boundary

(UGB) amendment to add approximately 444 acres of land to the existing UGB to accommodate the expected population growth and land use needs across the City. The extended UGB defines the Planning Area of the NHMP.

The Hazard Summaries in Chapter 4 identify the location and extent of each hazard. Impacts from each of the hazards can vary in geographic extent from a state or regional perspective, to a more localized impact that affects only a portion of the City. The planning process focused on the response by the City and the impacts to infrastructure and residents within the planning area.

3.2.1.2 Task 2. Building the Planning Team

The 2020 update of the Natural Hazard Mitigation Plan initially started in 2016 as an effort with the Jackson County Multi-Jurisdictional NHMP update process. While the Central Point NHMP was not updated, or included as part of that process, a Steering Committee was formed and the City began informing the residents and leaders of the importance of natural hazard mitigation. The current update reconvened the team from the previous efforts.

The Steering Committee determined that data collection, risk assessments and mitigation strategies would be enhanced by the feedback from public agency stakeholders. Based on their involvement in hazard mitigation projects or planning, and/or their interest as a neighboring jurisdiction, representatives from the following agencies were invited to participate on the NHMP update. Some of these participated at Steering Committee meetings while others reviewed drafts of the plan and provided feedback by email.

Other Government and Stakeholder Representatives:

- Avista Natural Gas
- Pacific Power & Light
- Rogue Valley Sewer Services
- Medford Water Commission
- Jackson County Housing Authority
- Jackson County Emergency Services
- City of Medford
- Oregon Department of Transportation
- Rogue Valley Council of Governments

Stakeholders were included in the planning process. Unlike the Steering Committee, stakeholders for the update were not included in all stages of the planning process, but their input was included to inform the Steering Committee and provide additional perspectives from the community.

The City of Central Point's Steering Committee members have varying degrees of expertise related to natural hazards mitigation projects and planning. Table 2.2 below outlines staff expertise and overall capabilities within the hazard mitigation categories promoted by FEMA's CRS Program.

Table 3.2: Steering Committee Expertise with Mitigation Categories

Department/ Agency	Prevention	Property Protection	Natural Resource Protection	Emergency Services	Structural Flood Control Projects	Public Information
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Planning Department	✓	✓	✓			✓
Building Division	✓	✓				✓
Police Department				✓		✓
Public Works	✓	✓	✓	✓	✓	✓
Parks and Recreation	✓		✓		✓	✓
Geographic Information Systems	✓					✓
Fire District No. 3	✓	✓	✓	✓	✓	✓
School District						✓
Pacific Power	✓					✓
Rogue Valley Sewer Services	✓					✓

During the planning process, the Steering Committee communicated through face-to-face and virtual meetings and e-mail. The Steering Committee formally met six times during the planning period (April 1, 2019 to October 13, 2020). The purpose of these meetings is described in Table 3.3. Agendas for each of the meetings and lists of attendees are included in Appendix E.

Table 3.3 Steering Committee Meeting Schedule

Meeting	Meeting Topic	Meeting Date
1	Kickoff	April 1, 2019
2	Assessing the Problem/Assess the Hazard	May 20, 2019
3	Setting Goals	June 17, 2019
4	Action Items – Review Activities	August 6, 2019
5	Mitigation Strategy – Create an Action Plan	February 26, 2020
6	Plan Review & Implementation	September 29, 2020

3.2.1.3 Task 3. Create an Outreach Strategy

The planning process provides opportunities for the community to participate and comment on the plan during its development. From the 2011 Plan:

Public participation is a key component of the mitigation planning process and offers citizens and stakeholders the opportunity to express their ideas and priorities for hazard mitigation activities.¹³

¹³ City of Central Point, Central Point Natural Hazard Mitigation Plan, 2011.

In order to engage the public on the NHMP update, a series of public meetings were scheduled with the Citizen's Advisory Committee (CAC), which is a volunteer board of Central Point residents that provides feedback and opinions on planning matters. It is also open to the public and provides a forum to inform residents of upcoming plans, code changes or other issues. The initial meeting with the CAC was advertised in the City Newsletter.

The update process, meeting schedules and agendas were included on the City's website and maintained by the Steering Committee. The website provides information about the mitigation planning process, the benefits of mitigation to the community, access to planning documents and an additional means of requesting public feedback.

Stakeholder participation was encouraged through one-on-one briefings and interviews. At each step of the update, including discussion of new data or risk assessment, stakeholders were contacted for input on the plan updates. A final presentation and request for comments on the plan updates was conducted with stakeholders on September 29, 2020.

3.2.1.4 Task 4. Review Community Capabilities

Hazard mitigation planning involves identifying existing policies, tools, and actions that will reduce a community's risk and vulnerability from natural hazards. Integrating existing planning efforts and mitigation policies and action strategies into this multi-hazard mitigation plan establishes a credible and comprehensive plan that ties into and supports other community programs. The development of each of the existing plans listed below involved public input and adoption by their respective responsible legislative body.

- [Strategic Plan Forward, A City Wide Strategic Plan](#)
The City of Central Point maintains a strategic plan in order to "... guide future decision-making as the community grows and changes."¹⁴ The guiding value of Resilience from the Strategic Plan is carried forward in the Natural Hazards Mitigation Plan by providing a foundation for the City and its residents to prepare for, adapt and respond to changes and sudden impacts.
- [Central Point Comprehensive Plan](#)
The Central Point Comprehensive Plan is the guiding policy document for land use and growth-related planning for the City. In order to properly identify the community's risks, the Natural Hazard Mitigation Plan relies heavily on the Population Element, Land Use Element, Transportation Element, and Regional Plan Element to identify the communities changing demographics, future population growth, and the physical direction of future growth.
- [Emergency Operations Plan](#)
The City's Emergency Operations Plan establishes guidance for how the City will respond to a major emergency or disaster. The guidance "... describes the roles and responsibilities of the City departments and personnel when an incident occurs..."¹⁵ The emphasis of the plan is on incident management instead of a hazard-specific response. It provides a framework for a coordinated, City-wide response to a natural hazard event.

¹⁴ Central Point Strategic Plan 2040, September 8, 2020, Resolution No. 1639.

¹⁵ City of Central Point Emergency Operations Plan, pp 1-1, June 2012

- [Storm Drainage Master Plan](#)

The Stormwater Master Plan (SWMP) establishes a capital improvement program to address stormwater capacity and water quality issues. The SWMP identifies areas within the City that lack capacity and may be subject to widespread flooding. Major recommendations include replacing under-sized components, incorporating water quality designs into upgrades, and install retrofits on structural components.

- [Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan](#)

The Jackson County hazard mitigation plan is a county-wide mitigation plan that identifies and assesses the hazards and associated risks throughout Jackson County. City of Central Point staff participated in the multi-jurisdictional planning process and the data, risk analysis, and response capacity is reflected in the City's 2020 updated plan.

- [Oregon Natural Hazards Mitigation Plan](#)

The DLCD developed the statewide natural hazard mitigation plan as "... the most complete and up-to-date description of Oregon's natural hazards and their probability, the state's vulnerabilities, its mitigation strategies and implementation capability. Oregon's counties and cities can rely upon this information when preparing local natural hazard mitigation plans." (2015)¹⁶

The plan segments the state into planning regions and identifies the southwest region as Region 4, which includes Josephine, Jackson and Douglas County (non-coastal). The regional assessment provides region specific information for hazards, characteristics, and vulnerabilities and provided baseline data for the City-specific update.

- [National Flood Insurance Program/FEMA Flood Insurance Study](#)

An important aspect of the Natural Hazard Mitigation Plan is to identify and implement mitigation actions that maintain consistency and compliance with existing efforts and requirements. As a participating community in the National Flood Insurance Program (NFIP), Central Point will continue to implement best practices to maintain compliance with NFIP. Central Point also participates in the Community Rating System (CRS), which provides additional benefits to residents through the City's flood protection measures. As of October 2019, Central Point was listed as a Class 6 community in the CRS Program and the City will strive to maintain good standing.

3.2.2 Phase 2: Assess Risks

3.2.2.1 *Task 5. Conduct a Risk Assessment*

The risk assessment process identifies hazards that are likely to affect Central Point and assesses the overall risk to the City's assets – including residents, infrastructure, and critical facilities. A risk assessment is a multi-step process that involves assessing the hazards and assessing the problem.

¹⁶ Oregon Department of Land Conservation and Development (DLCD), [Oregon Natural Hazards Mitigation Plan](#), 2015.

The hazard assessment identifies the individual hazards that impact Central Point and includes a description of where the hazard will occur within City, the extent of the expected hazard within the City, a history of when the hazard has occurred in the past, and the probability of any expected future occurrences. The Steering Committee identified hazards by comparing the hazards in the previous plan to hazards identified in the Oregon Natural Hazard Mitigation Plan (NHMP) for the Southwest Oregon (Region 4), and researching past events in the area.

Assessing the problem examines how the City will be affected by each particular hazard and determines potential impacts. Risks from a natural hazard event result because of the exposure of community assets to the destructive forces of the hazard. The City's vulnerability to each hazard was reviewed and the Risk Analysis was performed at the May 20, 2019 Steering Committee.

3.2.3 Phase 3: Develop a Mitigation Strategy

3.2.3.1 Task 6. *Develop a Mitigation Strategy*

After identifying hazards and the City's vulnerabilities, the Steering Committee created a strategy to reduce impacts and potential losses. The Steering Committee reviewed the existing mission statement and goals from the 2011 plan and agreed that it continues to support the purpose and intent of the updated plan. The goals provide the overall direction for the plan and articulates what the City hopes to achieve through mitigation planning. Minor revisions to the existing goals were included to align with the Oregon Natural Hazard Mitigation Plan.

In order to develop an updated mitigation strategy, the Steering Committee reviewed the mitigation actions from the 2011 plan. The first step in the review determined which actions had been completed since the development of the plan. A list of completed action items is included in Chapter 5.

Action items were developed to address the vulnerabilities and risks from each hazard Central Point. The Advisory Committee started with the action items developed during the previous NHMP planning process, and considered new options as the action plan was reviewed and analyzed in comparison to the mission, goals and updated risk assessment. In order to assure a comprehensive range of actions, specific items were developed for each hazard.

3.2.4 Phase 4: Implementation & Monitor Progress

3.2.4.1 Task 7. *Keep the Plan Current*

The Steering Committee developed and agreed upon an overall strategy for plan implementation, monitoring and maintaining the plan over time. Each recommended mitigation action includes key descriptors, such as a lead manager and possible funding sources, to help initiate implementation. The responsible agency assigned to each mitigation action item will be responsible for tracking and reporting on each of their actions. The City's Planning Department will be responsible for coordinating the monitoring process. An overall implementation strategy is described in Chapter 6: Plan Implementation and Maintenance.

The 2011 plan established a schedule of yearly meetings after the adoption of the plan, or after a significant disaster event, in order to review the implementation and effectiveness of the mitigation actions. The yearly meeting of the Steering Committee will evaluate the effectiveness of the updated plan and provide a report that demonstrates progress.

FEMA guidance requires the City revisit and update the NHMP at a minimum 5-year interval. With the 5-year time line, the Planning Department will document progress from the yearly progress meeting, using that information to help support the next plan update. It is also anticipated that the Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan will begin an update within 3 years, prior to the minimum required City update. At that time, the Planning Department will join the county-wide plan update efforts and update the City plan at that time for inclusion in the county plan.

3.2.4.2 Task 8. Review and Adopt the Plan

After the Steering Committee reviews the final draft and presents to the Citizens Advisory Committee for final comments, the 2020 update to the NHMP will be submitted to the State Hazard Mitigation Officer (SHMO) at the Oregon Military Department – Office of Emergency Management (OEM). Following a completeness review by OEM, the NHMP is sent to FEMA-Region X for review. This review addresses the federal criteria outlined in the FEMA Interim Final Rule 44 CFR Part 201. Upon acceptance by FEMA, the City Council will adopt the NHMP on the dates included in the adoption resolution in Appendix A: Adoption Resolution. Once the adoption is complete, final approval by FEMA occurs.

3.2.4.3 Task 9. Create a Safe and Resilient Community

The 2020 update to the NHMP reflects the City's commitment to protecting public safety and preventing loss. Reducing the vulnerability to disasters and enhancing the capability of the City and its citizens to respond effectively and recover quickly, makes the City more disaster resistant and disaster resilient.

In order for the Natural Hazard Mitigation Plan to be effective, it has to be implemented, continually evaluated, and periodically updated. The steps outlined in this Chapter demonstrate the City's comprehensive approach to hazard mitigation, logically thinking about hazards and risks to the City, cost-effective mitigation efforts, and incorporating those efforts into on-going decision-making.

4 Hazard Identification and Risk Assessment

44 CFR §201.6(c)(2)(i), The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

44 CFR §201.6(c)(2)(ii), The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods. The plan should describe the vulnerability in terms of:

44 CFR §201.6(c)(2)(ii)(A), The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area.

44 CFR §201.6(c)(2)(ii)(B), An estimate of the potential dollar losses to vulnerable structures identified in this section and a description of the methodology used to prepare the estimate.

44 CFR §201.6(c)(2)(ii)(C), Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

4.1 Introduction

Central Point is subject to a wide array of natural hazards. The purpose of this chapter is to identify the potential hazards and determine the potential impacts to the people, economy, existing and future development, and the natural environment of the City. Some hazard events, such as earthquakes or severe weather, may affect the entire city. Other hazards will only directly impact a portion of the city. The risk assessment is the first step in the mitigation planning process and provides a framework for the City to focus attention and resources on the greatest risks by mitigating or preparing for potential hazards.

4.2 Understanding Risk

Risk is an uncontrolled, or unexpected, loss of something of value. FEMA defines risk as “the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets” (2013)¹⁷. As shown in Figure 4-1, the risks from a natural hazard event result because of the exposure of community assets to the destructive forces of the hazard.

¹⁷ Federal Emergency Management Agency. Local Mitigation Planning Handbook, 2013. 5-1.

Figure 4-1 Understanding Risk



Source: *Local Mitigation Planning Handbook* (FEMA, March 2013)

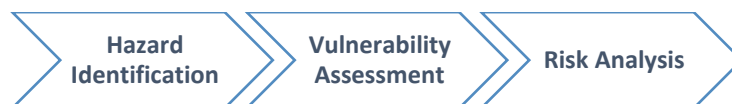
Another way to describe risk is the exposure of assets to a natural hazard. In this case, exposure is the quantity, value and vulnerability of a community's assets subject to one or more hazards. The more exposed assets are, the higher the risk. Risk results only when there is an overlap between assets and a hazard.

4.3 What is a Risk Assessment?

The risk assessment process identifies and profiles relevant hazards and assesses the exposure of lives, property and infrastructure to these hazards. The process allows for a better understanding of Central Point's potential risk to natural hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from hazard events.

A risk assessment consists of the three steps shown in Figure 4.2. Each step builds on the information and data gathered in the previous step in order to appropriately determine risks to the community.

Figure 4-2: Risk Assessment Process



As shown in the figure above, the first step in the process is Hazard Identification. This step not only identifies the individual hazards, but also includes a description of where the hazard will occur within City, the extent, or strength, of the expected hazard, a history of when the hazard has occurred in the past, and the probability of any expected future occurrences.

The second step in this process is the Vulnerability Assessment. This step examines the overlap between the natural hazards and the community assets. It examines how the City – the people, property, built environment and natural environment – will be affected by each particular hazard.

The final piece to a risk assessment is the Risk Analysis. This step examines the information from the previous steps and determines potential impacts. It identifies the potential for damages, losses and casualties arising from hazards.

4.4 Hazard Identification

Central Point identifies eight natural hazards that could have an impact on the city. Table 4.1 lists the hazards identified by the advisory committee. The list of hazards was developed by comparing the hazards in the previous plan to hazards identified in the Oregon Natural Hazard Mitigation Plan (NHMP) for the Southwest Oregon (Region 4), and researching past events in the area. The City's 2011 Hazard Mitigation Plan briefly addressed several *other hazards* which, as the plan states, "...pose minor or negligible threats to Central Point." (2011)¹⁸ The steering committee considered each of the hazards individually and while some still pose minor threats to the City, the risk from at least one hazard changed significantly due to changes in local conditions and recent hazard occurrences since the previous plan was completed.

Table 4-1: Central Point Hazard identification

Hazard	History	Vulnerability	Maximum Threat	Probability	Total Threat Score	Risk Level (H-M-L)
Earthquake (Cascadia)	2	50	100	70	222	High
Floods	20	25	50	70	165	High
Wildfire	10	25	50	70	155	High
Winter Storm	20	5	10	70	105	Medium
Windstorm	20	5	10	70	105	Medium
Drought	20	5	10	70	105	Medium
Earthquake (Crustal)	2	25	50	7	84	Low
Volcano	2	5	50	7	64	Low
Landslide	2	5	10	7	24	Low

4.5 Hazard Summaries

The following sections provide a description and overview of each hazard type. Each hazard summary includes information on hazard history and past occurrences, the extent or location of the hazard within or near the City, the probability of the hazard occurring in the future, and the vulnerability of the City to damages from the hazard.

¹⁸ City of Central Point, Central Point Natural Hazard Mitigation Plan, 2011.

4.6 Drought

Significant Changes since Previous NHMP:

The Jackson County NHMP is cited to include a record of significant drought events throughout Oregon and Jackson County.

Two (2) significant drought events have occurred since the previous NHMP.

The probability assessment of drought has been updated in consideration of past occurrences.

Drought is generally considered a period of abnormally dry conditions - one where a normal amount of moisture, in the form of precipitation, groundwater or surface water, is not available to satisfy an area's typical water needs. Droughts differ from other hazards; they are gradual events occurring over time with no defined beginning or end, with impacts that can span a large geographic region. Impacts from drought typically increase with the length of the drought as water supplies are gradually depleted and not replenished at their normal levels/rates.

4.6.1 Location and Extent

According to the *2015 Oregon Natural Hazards Mitigation Plan*,

Droughts can occur in any climatic region and at any time of the year. Oregon is continuously confronted with drought and water scarcity issues, despite its rainy reputation. Droughts can occur in Oregon in both summer and winter. While typically thought of as an issue that affects Eastern Oregon, droughts can and do occur in Western Oregon, including Central Point (2015)¹⁹.

Since droughts typically affect larger areas, and occur as regional or statewide events, they affect more than one city or county. A drought in Central Point will have impacts outside the city and affect Jackson County, and neighboring cities. The overall extent and geographic impact depends largely on the severity of moisture deficiency and the duration of the drought.

4.6.2 History

The most recent drought declaration for Central Point and Jackson County occurred in 2015. According to the Oregon Office of Emergency Management and Oregon Office of Water Resources *Drought Annex State of Oregon Emergency Operations Plan* from January 2016, "Record warm temperatures during 2015 contributed significantly to water supply shortages throughout the state. Warm temperatures led to a winter with record-low or near-record-low snowpack, contributing to dry soils and vegetation, as well as lower than normal streamflows and peak runoff occurring earlier in the year" (2016)²⁰. In all, 25 counties in Oregon were under a state drought declaration, including Jackson County and Central Point.

¹⁹ Oregon Department of Land Conservation and Development (DLCD), Oregon Natural Hazards Mitigation Plan, 2015.

²⁰ Oregon Office of Emergency Management and Office of Water Resources Drought Annex, State of Oregon Emergency Operations Plan, 2016.

Figure 4-3 Drought Declarations in Oregon 2015



Source: Oregon Office of Emergency Management and Oregon Office of Water Resources (2016)

Drought is a common occurrence throughout Oregon, with notable events for Central Point in 1976-1977, 1992, 2001 and 2015. The 2018 Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan²¹ highlights significant drought events, as listed below:

- **1904-1905:** Statewide drought period for about 18 months.
- **1928-1941:** A significant drought affected all of Oregon from 1928 to 1941. The prolonged statewide drought created significant problems for the agricultural industry. The first of the three Tillamook Forest burns occurred during this drought in 1933.
- **1976-1981:** Low stream flows prevailed in western Oregon during the period from 1976-1981, but the worst year by far was 1976-1977, the single driest year of the century.
- **1985-1997:** A dry period lasting from 1985 to 1994 caused significant problems statewide. The peak year was 1992 when the state declared a drought emergency. Drought status was declared by the governor in 1991, 1992 and 1994.
- **2000-2001:** Klamath drought intensifies; low snowpack in mountains worsen conditions. Drought status was declared by the governor in 2001.
- **2005:** February 2005 was the driest month on record since 1977, surpassing 2001 conditions. Above normal temperatures contributed to decreased water availability for the summer. Stream and river levels dropped significantly and watermasters regulated live flow use by irrigators. Drought conditions also led to the use of stored water, when it was available.
- **2010:** Determination of a State of Drought Emergency in Klamath County and adjacent counties (including Jackson County) due to Drought and Low Water Conditions (EO-10-03).

²¹ Jackson County Emergency Management, Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan, 2018

- **2014:** Determination of a State of Drought Emergency in Jackson County due to Drought and Low Water Conditions (EO-14-04).

- **2015:** Determination of a state of drought emergency in Deschutes, Grant, Jackson, Josephine, Lane, Morrow, Umatilla and Wasco counties due to drought, low snow pack levels and low water conditions.

4.6.3 Probability

Droughts in Jackson County are common occurrences with an average recurrence interval of approximately 8 and 12 years. Based on the available data, the Advisory Committee assessed the probability of experiencing a local drought as “**high**,” meaning one incident is likely within the next 10 to 35 years. *This rating has increased since the previous NHMP.*

4.6.4 Vulnerability

The Oregon NHMP states, “Droughts can affect commerce, agriculture, fisheries, and overall quality of life in the three Southwest counties. Jackson and Josephine Counties were declared federal primary natural disaster areas by the U.S. Department of Agriculture in 2013” (2015)²².

The advisory committee rated Central Point as having a “**low**” vulnerability to drought hazards, meaning less than 1% of city population and property will be affected by an “average” occurrence of drought. *This rating has not changed since the previous NHMP.*

4.6.5 Community Hazard Issues

As outlined in the Central Point Hazard Mitigation Plan, the City of Central Point purchases water from the Medford Water Commission. Water supply for Central Point, and other Medford Water Commission customers, is not highly vulnerable and rationing due to drought has not been implemented (2011)²³.

Drought conditions have the greatest impact to the natural environment: increase to the risk of wildfires and reduced stream flows impacting fish and wildlife. As discussed in the Wildfire Section, Central Point and other urban areas in Jackson County, once considered outside of the defined areas of a wildland-urban interface (WUI), are now considered at risk as demonstrated by the Peninger Fire in 2018, a fast moving grass fire that started along the Bear Creek Greenway.

During times of drought, migrating fish can compete with other water consumption uses. Reduced stream flows are at risk for increased temperatures, additional silt and sediment loads and habitat fragmentation that put endangered salmonids at increased risk.

²² Oregon DLCD, 2015

²³ Kenneth A. Goettel, Central Point Hazard Mitigation Plan, 2011

4.7 Earthquake

Significant Changes since Previous NHMP:

The previous NHMP considered Central Point more vulnerable to a crustal earthquake than a large Cascadia event. The rating for a Cascadia event has not changed since the previous NHMP; the rating for a crustal earthquake has decreased.

Awareness of earthquakes in Oregon began to increase in the 1980's. Earthquakes in the 1990's, including the Scott Mills and Klamath Falls earthquakes in 1993, demonstrated the potential hazards of localized crustal earthquakes. In the 2000's, large-scale international earthquakes and the resulting tsunamis highlighted additional risks to Oregon from offshore earthquakes.

The Oregon NHMP identifies four (4) types of earthquakes that may occur in the Pacific Northwest: 1) the offshore Cascadia Subduction Zone; 2) deep intraplate events within the subducting Juan de Fuca Plate; 3) shallow crustal events within the North American Plate; and 4) earthquakes associated with volcanic activity²⁴.

4.7.1 Location and Extent

It is not possible to forecast the location or size of an earthquake; risks must be determined based on the susceptibility of a specific area and the expected intensity of an earthquake. The City's Hazard Mitigation Plan identifies four (4) main factors that are used to determine the overall severity of an earthquake: 1) Magnitude, 2) Proximity, 3) Depth, and 4) Soil/Rock Conditions²⁵. Larger magnitude earthquakes affect larger geographic areas, with more widespread damage. However, as distance from the epicenter increases, both vertically and horizontally, the intensity of the ground-shaking decreases.

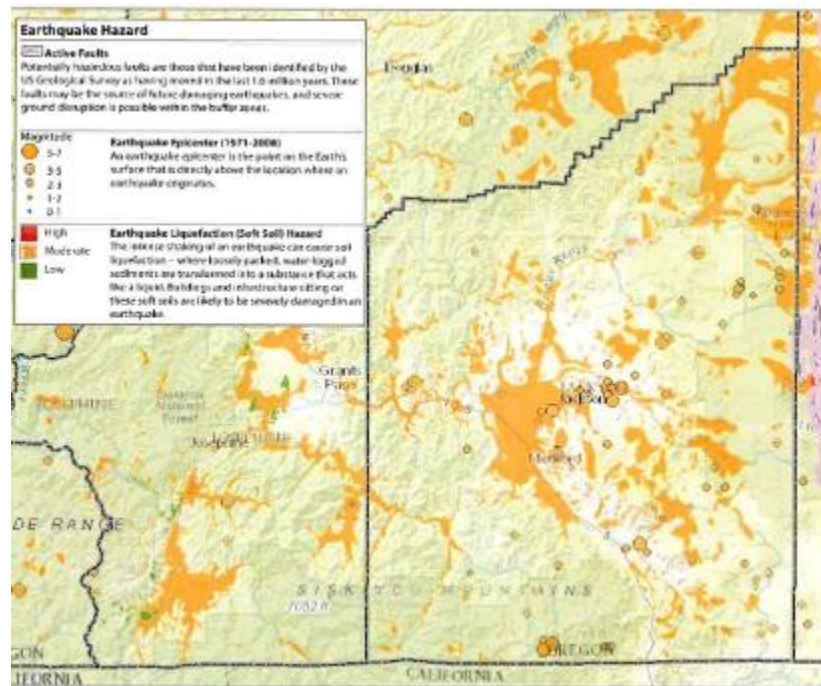
The City's Hazard Mitigation Plan also notes that the intensity of ground-shaking varies not only as a function of magnitude and distance, but also depends on the characteristics of the underlying soil and rock²⁶. Two hazards often associated with soil conditions include the amplification of ground-shaking through soft soils and ground failure, or loss of strength, due to liquefaction. Figure 4-4 shows a generalized map of Jackson County and includes the areas for potential liquefaction, where a soil temporarily behaves as a liquid and is unable to support structures or other improvements. Central Point is in an area of moderate liquefiable soft soil.

²⁴ Oregon DLCD, 2015

²⁵ City of Central Point, 2011

²⁶ City of Central Point, 2011

Figure 4-4: Areas of Soft Soils



Source: Jackson County Hazard Mitigation Plan (2018)

The majority of the earthquakes shown in the figure above are low-impact events below a magnitude (M) of 3.0, although six (6) mapped events are shown with M 3-5. The larger events may have been slightly felt but little to no structural/property damage resulted. In order for liquefaction to occur, a magnitude greater than 5 is needed, unless the soils are very soft and generally unsuitable for building construction (Green & Bommer)²⁷. Therefore, the seismic hazard for Central Point is predominately from major earthquakes on the Cascadia Subduction Zone. Smaller, crustal earthquakes in or near the City could be locally damaging, but are not expected to produce widespread, major damage.

4.7.2 History²⁸

- **1700** (January 26): Offshore, Cascadia Subduction Zone (CSZ)- Approximate 9.0 magnitude earthquake generated a tsunami that struck Oregon, Washington and Japan; destroyed Native American villages along the coast (additional CSZ events occurred approximately in 1400 BCE, 1050 BCE, 600 BCE, 400, 750 and 900)
- **1873 (November 23)**: 6.75 quake near California Border. Damage was reported along the coast and in Josephine and Jackson Counties. Source is speculated to be originated from the Cascadia Subduction Zone.
- **1920 (April 14)**: Quake centered near Crater Lake – No record of reported damage.

²⁷ Russel A. Green and Julian J. Bommer. Smallest Earthquake Magnitude that Can Trigger Liquefaction. (Blacksburg, VA: Virginia Polytechnic Institute and State University Center for Geotechnical Practice and Research, 2018).

²⁸ Jackson County Emergency Management, NHMP (2018)

- **1993 (September 20):** Klamath Falls Earthquakes, two (2) magnitude 5.9 and 6.0 earthquakes that caused \$7.5 million in damages and killed two (2; one heart attack, one crushed by a boulder while driving); felt in Southern Oregon.

- **1999 (November 28):** This earthquake's epicenter was located 13.9 miles west-northwest of Klamath Falls, almost precisely where two earthquakes originated six years prior. Ground motion was felt in Medford, 45 miles away, but there were no reported injuries or damages.

4.7.3 Probability

The return period of earthquakes can be estimated based on the average time between past events. Based on the historical record, the Cascadia Subduction Zone (CSZ) generates an earthquake every 500-600 years. Establishing the probability for crustal earthquakes is difficult given the small number of historical events that have occurred. As noted in the 2011 Hazard Mitigation Plan, earthquakes are possible almost any place in the vicinity of or within Central Point based on the historical seismicity of Western Oregon and analogies to geologically similar areas.

Central Point's Natural Hazards Advisory Committee believes the probability of experiencing a crustal earthquake is "**low**", meaning one incident is likely within the next 75-100 years; the committee believes that the probability of experiencing a Cascadia event is "**high**", meaning one incident is likely within the next 10-35 years. Based on the available information, the Oregon NHMP Regional Risk Assessment supports this probability rating for Central Point. *The rating for a crustal earthquake has decreased since the previous NHMP; the rating for a Cascadia earthquake has increased since the previous NHMP.*

4.7.4 Vulnerability

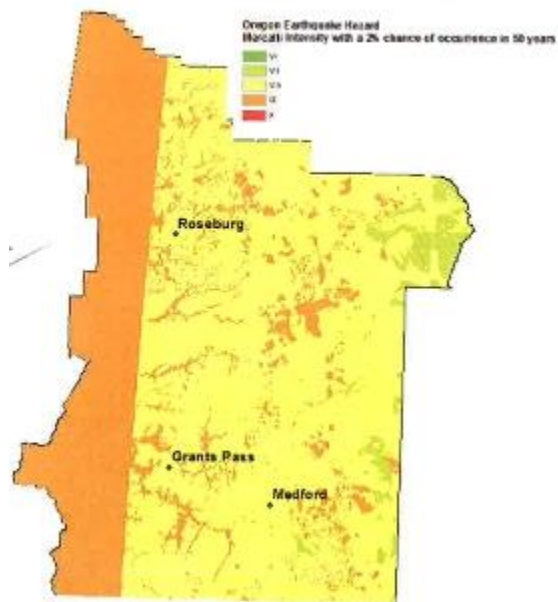
The advisory committee rated Central Point as having a "**high**" vulnerability to the Cascade earthquake, meaning more than 10% of the population or assets would be affected; the committee rated the City as having a "**moderate**" vulnerability to crustal earthquake hazard, meaning between 1% and 10% of the City's population or assets would be affected. *The previous NHMP considered Central Point more vulnerable to a crustal earthquake than a large Cascadia event. The rating for a Cascadia event has not changed since the previous NHMP; the rating for a crustal earthquake has decreased.*

4.7.5 Community Hazard Issues

The elevated risk of Central Point to earthquake is due to a number of factors, including the proximity of crustal earthquake faults to the east, the Cascadia Subduction Zone to the west and the underlying soils subject to a moderate level of liquefaction and amplification. Figure 4-5 shows the expected level of earthquake damage along all known faults in Oregon that could impact Southern Oregon that have a 2-percent chance of occurring in the next 50 years. Based on the Simplified Mercalli Levels defined by Madin and Burns (2013), Central Point is subject to Level VIII effects of shaking, meaning significant to substantial damage in vulnerable buildings can be expected²⁹.

²⁹ Ian P. Madin and William J. Burns. Ground motion, ground deformation, tsunami inundation, coseismic subsidence, and damage potential maps for the 2012 Oregon Resilience Plan for Cascadia Subduction Zone earthquakes (Open-File Report O-13-06). Portland, OR: Oregon Department of Geology and Mineral Industries (2013).

Figure 4-5: Earthquake Hazards based on Mercalli Levels



Source: Madin and Burns (2013)

In 1999, the Oregon Department of Geology and Mineral Industries (DOGAMI) developed two earthquake loss models for Oregon based on the two most likely sources of seismic events: 1) the CSZ, and 2) combined earthquake events³⁰. The CSZ event is based on a potential 8.5 earthquake generated off the Oregon coast. The 500-year crustal model does not look at a single earthquake (as in the CSZ model); it encompasses many faults, each with a 10% chance of producing an earthquake in the next 50 years. The model assumes that each fault will produce a single “average” earthquake during this time. Neither model takes unreinforced masonry building into consideration. The projected loss estimates are calculated for all of Jackson County, which is projected to experience some of the greatest losses and damages in Oregon.

Table 4-2 is taken from the Jackson County NHMP that accounts for inflation and adjusts the economic loss data from DOGAMI’s 1999 report. Loss data is presented for the entire area of Jackson County and is specific to Central Point, individually. Adjusted for 2019 dollars, losses county-wide are expected to be \$831 million for the Cascadia model and approximately \$1.85 billion for the 500-year crustal model. Whereas Jackson County is at greater risk to a crustal earthquake due to the location of faults in the Cascade Mountains along the east boundary of the county, Central Point is at greater risk from a Cascadia Subduction Zone event.

³⁰ Yumei Wang and J. L. Clark. Earthquake Damage in Oregon: Preliminary Estimates of Future Earthquake Losses (Open-File Report O-98-3). Portland, OR: Oregon Department of Geology and Mineral Industries (1999).

Table 4-2: Jackson County Earthquake Damage Summary

Jackson County	8.5 Cascadia Subduction Zone Event	500-Year Model
Injuries	428	930
Death	8	18
Displaced households	650	1,458
Shorter-term shelter needs	489	1,080
Economic losses for buildings	\$38 million (\$831 million*)	\$1.2 billion (\$1.85 billion*)
Economic Losses to		
Highways	\$10 million (\$15.4 million*)	\$34 million (\$52.5 million*)
Airports	\$2 million (\$2.9 million*)	\$8 million (\$12 million*)
Communication Systems	\$2 million (\$3.1 million*)	\$9 million (13.9 million*)

Source: Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan (2018)

Note: * - 1999 dollars were adjusted for inflation to represent estimated economic loss in 2019 dollars using the Oregon State of Employment Department Inflation Calculator.

The greatest risk to Central Point is from older buildings that were constructed prior to seismic construction requirements. As directed by Oregon Senate Bill 2 (2005), DOGAMI completed a statewide seismic needs assessment, including a rapid visual screening (RVS), of critical infrastructure buildings³¹. RVS is used to identify and rank buildings to their risk of collapse in an earthquake.

Table 4-3 Rapid Visual Survey Scores

Facility	Level of Collapse Potential			
	Low (<1%)	Moderate (>1%)	High (>10%)	Very High (100%)
Schools				
Central Point Elementary School			X	
Crater High School	X			
Jewett Elementary School		X		
Richardson Elementary School	X		MITIGATED - 2019	
Scenic Middle School	X			
Public Safety				
Central Point Police Department	X			
Jackson County Fire District #3	X		MITIGATED	

³¹ Don Lewis. Statewide Seismic Needs Assessment: Implementation of Oregon 2005 Senate Bill 2 Relating to Public Safety, Earthquakes, and Seismic Rehabilitation of Public Buildings (Open-Report O-07-02). Portland, OR: Oregon Department of Geology and Mineral Industries (2007).

(600 S Front St)	
Oregon State Police	X

Source: DOGAMI Statewide Seismic Needs Assessment Using Rapid Visual Screening (2007)

As noted in the community profile, approximately 38% of residential buildings in Central Point were built prior to 1990 and approximately 7% of structures built prior to the 1954 seismic standards. Prior to the seismic standards, structures are likely inadequate to withstand the impacts of an earthquake. A common construction technique prior to the 1960's was the use of unreinforced masonry buildings, which are low level buildings, generally between three (3) and four (4) stories, with brick walls that lack metal reinforcements for structural stability³². In the booklet, *Unreinforced Masonry Buildings and Earthquakes: Developing Successful Risk Reduction Programs* (FEMA 2009)³³, FEMA identifies unreinforced masonry buildings as the most vulnerable category of construction at risk for seismic damage in a community. The number of unreinforced masonry buildings in Central Point is not known. A city-wide rapid visual survey is required to determine the risk of collapse for specific structures.

Damages to utility services, including water, wastewater, natural gas and electric power, are also expected. From the Jackson County NHMP, "Utility systems will be significantly damaged, including damaged buildings and damage to utility infrastructure, including water and wastewater treatment plants and equipment at high voltage substations (especially 230 kV or higher which are more vulnerable than lower voltage substations). Buried pipe systems will suffer extensive damage with approximately one break per mile in soft soil areas. There would be much lower rate of pipe breaks in other areas. Restoration of utility services will require substantial mutual aid from utilities outside of the affected area. (2019)³⁴"

³² Tara Kulash, "Is My Home Going to Protect Me? And Other Portland Earthquake Questions," The Oregonian, 22 April 2019.

³³ Federal Emergency Management Agency, Unreinforced Masonry Buildings and Earthquakes: Developing Successful Risk Reduction Programs, 2009.

³⁴ Jackson County Emergency Management, NHMP (2018)

4.8 Floods

Significant Changes since Previous NHMP:

The Flood Insurance Rate Map was revised September 14, 2016.

A significant flood event occurred in November 2012, resulting in NFIP losses to properties in Central Point.

FEMA defines a flood as “A general and temporary condition of partial or complete inundation of normally dry land areas” (2006)³⁵. Flooding results when the volume of water, in the form of rain or snowmelt, is in excess of the ability of streams, ditches, or the storm drain system to contain it. The excess water is no longer confined to the streambed or in culverts and pipes, and flows across yards, streets and other areas of the City.

Central Point is at risk of three (3) types of floods: 1) riverine floods, 2) urban floods and 3) dam failure. Riverine floods occur when the water in a stream or river overtops the banks and spills onto the area adjacent to the stream channel, called the floodplain. Urban floods occur when the storm system is inadequate to handle the volume of runoff from nearby development or obstructions leading to flooding of streets and other low-lying areas. Dam failures occur when a dam is overtopped or structurally fails causing massive, wide-spread and sudden flooding.

4.8.1 Location and Extent

4.8.1.1 Riverine Floods

The City of Central Point has seven (7) streams that are identified as flood sources, including:

- Bear Creek, which flows along the eastern part of the City;
- Griffin Creek, Jackson Creek, Mingus Creek and Elk Creek, which flow through the City; and
- Daisy Creek and Horn Creek, which are tributaries to Griffin Creek and Jackson Creek, respectively.

Flooding along the creeks is most frequent from October through April during periods of heavy rain and/or snowmelt. Because the drainage areas of these creeks are small, flash floods may occur where the extent of flooding is influenced by runoff over a short period of time.

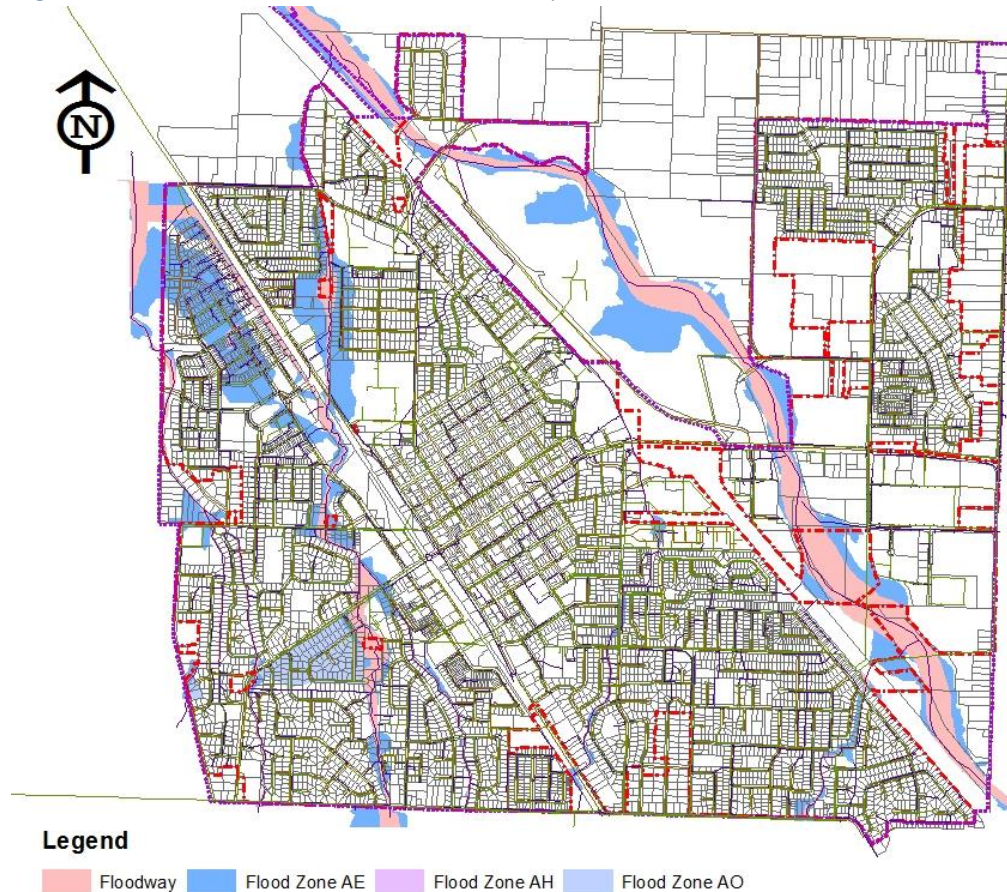
FEMA provides inundation maps for the creeks within the City, called the Flood Insurance Rate Map (FIRM). The flood areas on the FIRM are quantified by magnitude, or the probability of occurrence in any given year. Figure 4-6 shows the flood hazard areas mapped by FEMA for Central Point, which includes the following flood risk zones:

- Zone AE: Areas with a one (1) percent annual chance of flooding with detailed flood hazard data, including base flood elevations.
- Zone AO: Areas with a one (1) percent annual chance of shallow flooding, including average base flood depths to the nearest whole foot only.
- Zone AH: Areas with a one (1) percent annual chance of shallow flooding, usually areas of ponding, including flood depths to the nearest whole foot only.

³⁵ Code of Federal Regulations, Title 44 Chapter 1 Part 59 [44CFR59.1], October 1, 2006.

- Zone X-Shaded: Areas of 0.2-percent annual chance flood. No base flood depths are shown within this zone.
- Zone X-Unshaded: Areas outside of the 0.2-percent annual chance flood. No base flood depths are shown within this zone.

Figure 4-6: Central Point Flood Hazard Map



Source: FEMA Flood Insurance Rate Map; Map No. 41029C, Panels 1768F, 1769F, 1756F, 1757F (2016)

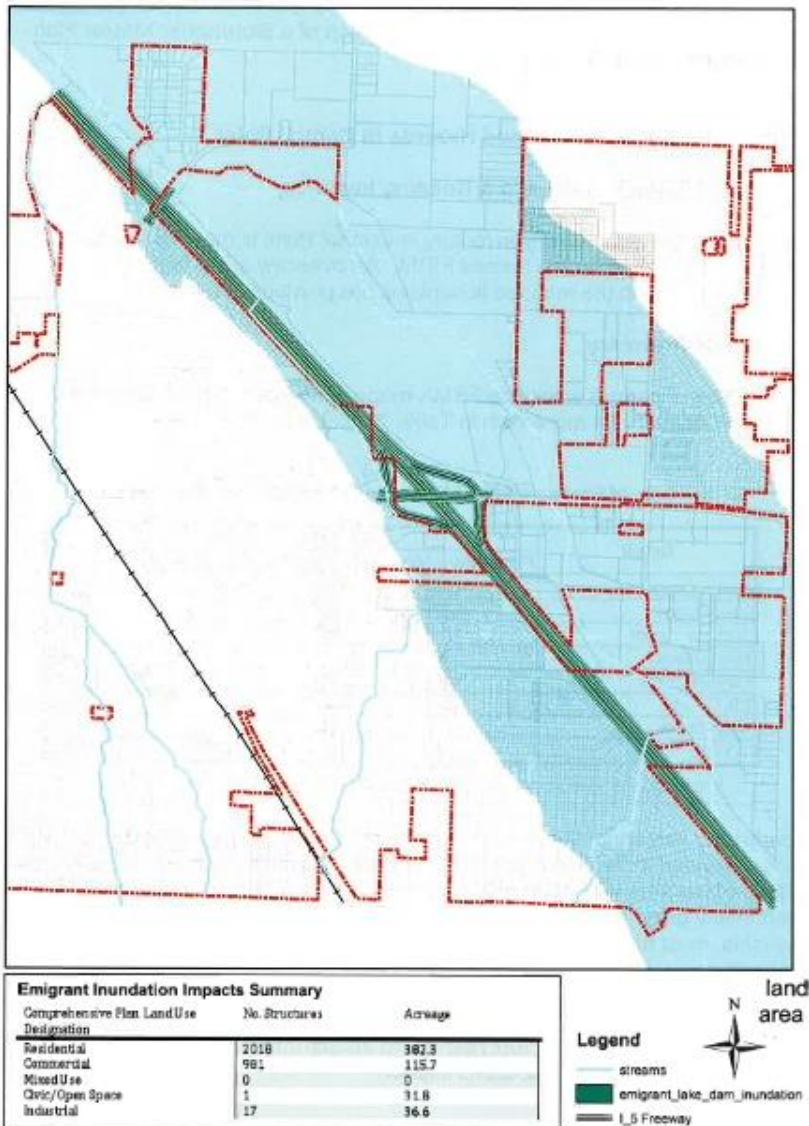
4.8.1.2 Urban Floods

Urban flooding can occur throughout the City where the storm system is overloaded by the amount of water flowing into it or because of obstructions in the system that causes the water to back up. The extent of urban flooding is difficult to predict, but the City has identified areas within the downtown that lack facilities that may be more prone to urban flooding.

4.8.1.3 Dam Failure

Emigrant Dam is upstream of the City and could impact Central Point with flood waters along Bear Creek in the event of a dam failure. The extent of flooding from Emigrant Dam would depend on several factors at the time of the dam failure, including the water levels in Bear Creek and the amount of water stored in Emigrant Lake behind the dam. Figure 4-7 is an inundation map that shows the areas along Bear Creek that could be impacted by a dam failure.

4.8.2 Figure 4-7: Emigrant Dam Inundation Zone



Source: U.S. Bureau of Reclamation (2010)

4.8.3 History³⁶

- **1890 (February):** Heavy and consistent snowfalls from October to January, followed by rising temperatures and 7-inches of rain in the first five days of February. Widespread damage, including all major bridges washed out, throughout Jackson County.
- **1962 (December):** Heavy rain totaling 3 to 4 inches across the Rogue Valley that caused widespread street flooding, with heavy damages to farmland across the valley.
- **1964 (December):** Flooding along Mingus Creek and Daisy Creek, but no extensive damage. The situation on Daisy Creek was aggravated by a channel obstruction on Griffin Creek. The Mingus Creek situation was partly due to undersized drainage structures.

³⁶ Jackson County Emergency Management, NHMP (2018)

- **1997 (January):** The New Year's Day Flood. Six of seven creeks in the City experienced flood conditions, with most extensive flooding and damage along Griffin Creek. Highway 99 was overtopped, the Crater High School football field and track were flooded and properties along Comet Way and Nancy Avenue were heavily impacted. In total, over 15 residences were evacuated at an estimated \$310,000 in damages City-wide.
- **2012 (November):** Heavy rains resulted in at least four (4) NFIP losses in the area around Central Point.

4.8.4 Probability

From the Central Point Hazard Mitigation Plan, "The frequency and severity of flooding (level of flood hazard) is not determined simply by whether the footprint of a given structure is or is not within the 100-year floodplain. A common error is to assume that structures within the 100-year floodplain are at risk of flooding while structures outside of the 100-year floodplain are not." Despite the reference as the '100-year' flood, it has a one (1) percent chance of occurring in any year. (2011)³⁷

Central Point is also located near the bottom of the drainage area for the creeks that flow from the County. Given this location near the valley floor, increases in flows higher in the watershed could result in floods in the City.

Central Point's Natural Hazards Advisory Committee believes the probability of experiencing a flood event is "**high**", meaning one incident is likely with the next 10-35 years. *This rating has not changed since the previous NHMP.*

4.8.5 Vulnerability

The advisory committee rated Central Point as having a "**moderate**" vulnerability to flood hazards, meaning between 1% and 10% of the City's population or assets would be affected. There are currently over 350 structures within the one (1) percent annual chance, or 100-Year, floodplain boundary, with approximately 112 of those located within the high hazard floodway, out of approximately 7,200 parcels in the City. *This rating has not changed since the previous NHMP.*

4.8.6 Community Hazard Issues

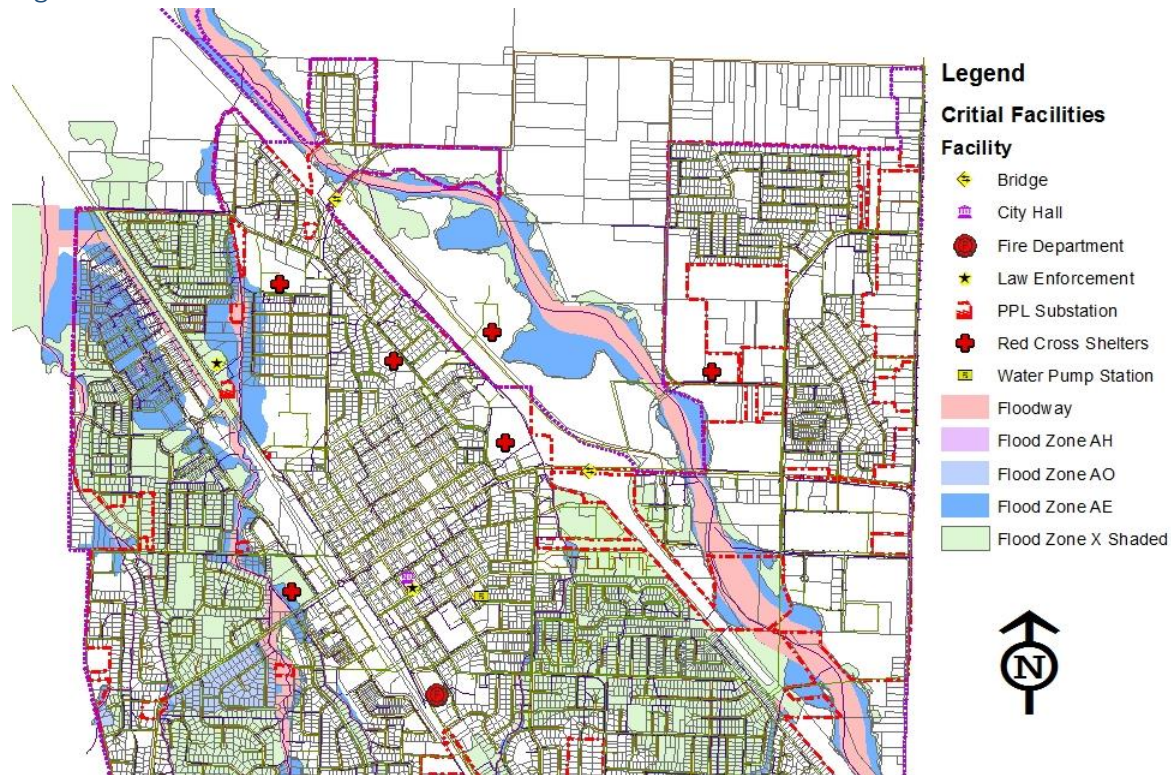
FEMA data provided to the City indicates that as of September 30, 2019, there were a total of 313 flood insurance policies within Central Point representing \$68,185,700 of insurance coverage in force. Of these, 128 are located in A zones (100-year floodplain areas); 57 standard and 23 preferred policies are located in the B, C, and X zones (the area between the 100-year and 500-year floodplains, including the 500-year flood). Historically, there have been 28 flood loss claims totaling \$149,791. These included 20 claims for properties in A zones, and 4 standard and 4 preferred policies were for properties in B, C, and X zones. Twenty (20) claims were paid to Pre-FIRM structures and 8 were for Post-FIRM structures. There are currently no repetitive loss properties within Central Point.

Figure 4-8 shows the location of Critical Facilities throughout Central Point. There are currently three (3) critical facilities in flood risk areas. The Oregon State Patrol barracks and Pacific Power substation on Highway 99 are within the 0.2 percent annual chance floodplain and a portion of the properties are within the one (1) percent annual chance floodplain area. The Mae Richardson Elementary School,

³⁷ City of Central Point, 2011

which serves as a Red Cross Shelter is located within the 0.2 percent annual chance floodplain. A portion of the school property also extends into the one (1) percent annual chance floodplain.

Figure 4-8: Critical Facilities in Flood Hazard Areas



Source: City of Central Point Geographic Information Systems (2011)

For Central Point, urban flooding due to storm water drainage problems have been minor. The storm water systems are designed to handle more common small- to medium-sized runoff events and allow minor street flooding to carry off stormwater that exceeds the system capacity.

Dam failures can also pose a risk to property owners downstream. According to the Bureau of Reclamation, Emigrant Dam has a very low risk of failure. The inundation information presented in Figure 4-7, which shows Interstate 5 completely inundation along with a significant portion of the City that parallels Bear Creek, including residential, commercial, industrial, civic and open space land uses. The dam failure inundation area does not show on the City's FIRM's because the risk exceeds the one (1) percent annual chance mapped by FEMA.

4.9 Landslides

Significant Changes since Previous NHMP:

This section was expanded to include probability and vulnerability assessments.

Landslide is a movement of earth material (i.e. rock, mud) or other material down a slope due to gravity. Landslides are generally described by the type of material, nature of the slope failure and other characteristics to classify the hazard. The USGS classifies landslides into five (5) types of movements: 1) falls, 2) topples, 3) slides, 4) spread, and 5) flows³⁸. Mudslides, a type of debris flow, and rock falls are common examples of types of landslides.

4.9.1 Location and Extent

Landslides can occur almost anywhere; however, they are more common and predominately occur in hilly or mountainous areas, or steep slopes with unstable soils. The topography of Central Point is predominantly flat with minimal slopes. As shown in Figure 4-9, the risk of landslides is generally confined to a few stream bank areas that are deeply incised.

Figure 4-9: Central Point Landslide Susceptibility



Source: Oregon HazVu: Statewide Geohazards Viewer

4.9.2 History

From the Jackson County NHMP:

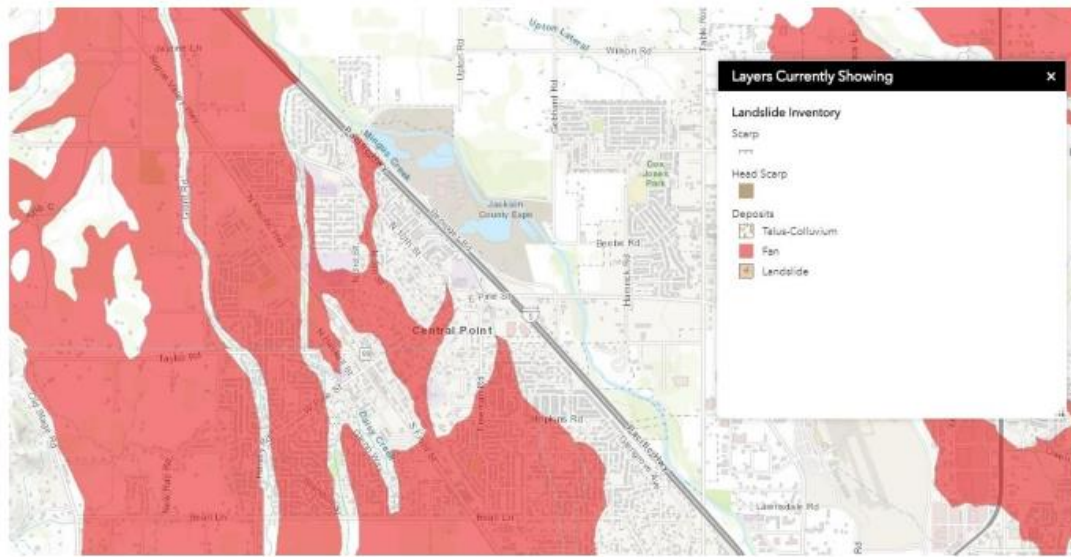
“Debris flows and landslides are a very common occurrence in hilly areas of Oregon, including portions of Jackson County. Many landslides occur in undeveloped areas and thus may go

³⁸ L.M. Highland and Peter Bobrowsky, The Landslide Handbook – A Guide to Understanding Landslides (Reston, VA: US Geological Circular 1325).

unnoticed or unreported. For example, DOGAMI conducted a statewide survey of landslides from four winter storms in 1996 and 1997 and found 9,582 documented landslides, with the actual number of landslides estimated to be many times the documented number. For the most part, landslides become a problem only when they impact developed areas and have the potential to damage buildings, roads or utilities.”³⁹

Figure 4-10 shows the landslide inventory for Central Point and Jackson County. Whereas the landslide inventory shows Central Point largely located on fan deposits, the material was deposited through erosion along floodplains and alluvial outwash during uplift of the areas mountainous terrain⁴⁰. There are no documented landslides in Central Point.

Figure 4-10: Landslide Inventory



Source: Oregon HazVu: Statewide Geohazards Viewer

4.9.3 Probability

While there is near 100-percent probability that a landslide will occur in this region, predicting where or when it will occur is difficult⁴¹. Landslides are more likely in areas where they have previously occurred and on slopes that are more susceptible. With the no past occurrences and minimally sloped topography, the Advisory Committee assessed the probability of landslides in Central Point as **“low”**, meaning one incident is likely within the next 75 to 100 years. *This rating has not changed since the previous NHMP.*

4.9.4 Vulnerability

The advisory committee rated Central Point as having a **“low”** vulnerability to landslides, meaning less than 1% of city population and property will be affected by an “average” occurrence of landslide. *This rating has not changed since the previous NHMP.*

³⁹ Jackson County Emergency Management, NHMP, 2018.

⁴⁰ David R Johnson, Soil Survey of Jackson County Area, Oregon (Washington, DC; Soil Conservation Service, 1994).

⁴¹ Oregon DLCD, 2015

4.9.5 Community Hazard Issues

As shown in Figure 4-9, Central Point's vulnerability to landslides is limited to a few stream banks that are deeply incised. Possible landslides in these locations would be accurately described as bank failures, which would be very localized and not occur along the length of a stream channel. The threat of loss to life or property and damage to structures, including critical facilities, is minimal. The City's flood protection requirements establish setbacks along the stream corridors and prevent the location of structures within the areas at risk of bank failure.

4.10 Severe Weather

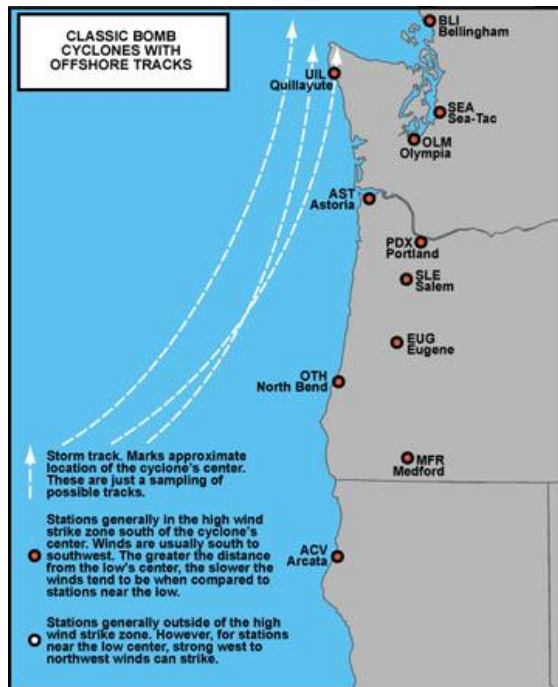
Significant Changes since Previous NHMP:

Windstorms were previously considered part of winter storms and are considered separately in the update to the NHMP. The vulnerability and probability ratings of windstorms has increased with the update.

The probability assessment of severe weather has been updated in consideration of past occurrences.

The severe weather section includes information on both wind storms and winter storms. The most common months for severe weather in Southern Oregon are from October to April, which is largely influenced by deep low pressure areas that form over the Pacific Ocean. The storms are generally larger events that affect larger geographic areas with impacts that extend beyond Central Point. These events can produce heavy rains, snow, ice, severe cold and high winds. The impacts of most of the historical storms listed below were felt in other communities in the Rogue Valley and even other parts of the State.

Figure 4-11: Pacific Ocean Storm Track The Classic Cyclogenetic Bombs



Source: The Strongest Windstorms in the Western Pacific Northwest 1950-2004⁴²

4.11 Wind Hazard Data

The windstorms considered in this chapter are storms with winds great enough to cause damage, generally in excess of 50 mph. The wind speeds may be reached by sustained winds or gusts, and involve

⁴² Wolf Read. "The Strongest Windstorms in the Western Pacific Northwest 1950-2004," The Storm King: The Climatology and Meteorology of Windstorms That Affect the Cascadia Region of North America, Including the US. Pacific Northwest and Southwest British Columbia, Canada. 9 September 2004.

<https://climate.washington.edu/stormking/PNWStormRanks.html> (16 January 2020).

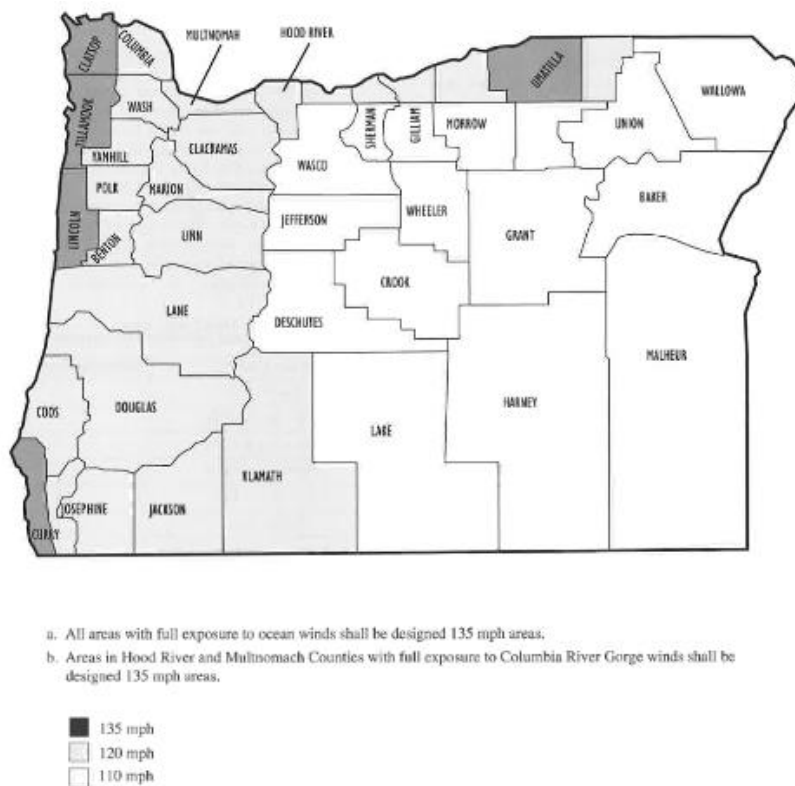
straight-line winds, excluding tornadoes. Strong winds can cause trees and limbs to fall and break, down utility lines, damage buildings directly or from debris, and block transportation.

4.11.1 Location and Extent

Windstorms in Central Point are not as dramatic as those along the Oregon Coast or in the Columbia Gorge. The predominate wind pattern for destructive winds reaching Central Point is from the southwest because of storms forming over the Pacific Ocean, then traveling eastward. Some winds blow from the east, but do not carry the same destructive forces as those from the west. The valley is, however, susceptible to south winds that travel in the same direction as the mountains, as experienced during the Columbus Day storm in 1962, which caused wide spread damage throughout the region⁴³.

Typically, mountainous terrain can slow down wind movement, which is why Central Point has lower than expected wind hazards than other areas of Oregon. As shown in Figure 4-12, the maximum wind speed that structures 33-feet above the ground would experience is about 120 mph.

Figure 4-12: Wind Zone – 2017 Oregon Residential Specialty Code



Source: 2017 Oregon Residential Specialty Code⁴⁴

Central Point experiences an average of nine (9) thunderstorms annually. Thunderstorms can create localized wind events by producing downdrafts of rain-cooled air. These downbursts are generated by a column of sinking air that spreads out rapidly in all directions once it reaches the ground⁴⁵. The straight-

⁴³ Oregon DLCD, 2015.

⁴⁴ International Code Council, 2017 Oregon Residential Specialty Code. (Country Club Hills, IL, 2017). 35.

⁴⁵ Pacific Northwest Windstorm. (n.d.). In Wikipedia. Retrieved January 16, 2020, from http://en.wikipedia.org/wiki/Pacific_Norhtwest_windstorm

line winds from a downburst can produce gusts of 100 mph or greater and the damage may resemble that caused by a tornado. Unlike winds produced by large low pressure areas off the coast of Oregon, the damage from downbursts are more localized within Southern Oregon.

4.11.2 History

Windstorms have occurred frequently in Western Oregon, with each decade generally producing one or two significant events that cause widespread damage. The most recent windstorm was associated with a strong low pressure system in late November 2019 that produced gusts in excess of 58 mph at the Medford Airport. The most significant storm in Oregon's recorded history is the 1962 Columbus Day Storm. This storm produced heavy winds and extensive damage along the Coast, throughout the Rogue Valley, Portland, and even into Eastern Oregon.

The 2018 Jackson County NHMP⁴⁶ highlights significant windstorm events, as listed below:

- **2012 (Dec 16):** After a lull in storm activity, a strong cold front brought high winds back to portions of southern Oregon. 85 mph gusts.
- **2012 (Dec 19):** The stormy pattern continued as another cold front brought high winds to portions of southern Oregon. Peak gusts of 99 mph in some areas.
- **2013 (Sept 28):** The first strong system of the season brought high winds to portions of southern Oregon. Average gusts of 75 mph with peak gusts of 92 mph. The Oregon Department of Transportation reported 8-9 trees down across Oregon Highway 230, 12 trees down across Oregon Highway 62 and numerous trees down across Oregon Highway 138. Based on all this, it is assumed that the winds in ORZ027 met high wind warning criteria. Average gusts of 75 mph with peak gusts of 89 mph.
- **2014 (Feb 15):** An incoming front brought high winds to several areas around southern Oregon. Average gusts between 75-80 mph.
- **2014 (Mar 5-6):** An incoming front brought strong winds to portions of southern Oregon. Peak gusts of 92 mph.
- **2014 (Oct 22):** A member of the public reported wind gusts estimated at 50-60 mph downed several trees in the Dark Hollow area southwest of Medford. The tops of two large healthy trees were broken, one an oak and the other a poplar. No property damage. The high winds lasted around 45 minutes. Peak gust of 79 mph.
- **2014 (Oct 24-25):** A strong front brought high winds to many parts of southwest and south central Oregon. Peak gusts of 105 mph.

⁴⁶ Jackson County Emergency Management, NHMP, 2018

- **2014 (Dec 10):** An incoming front on 12/10/14 brought strong winds to many parts of southern Oregon and northern California. A rapidly developing low pressure system behind the first front brought another round of high winds on 12/11/14. Both of these events were covered by a long duration High Wind Warning. Average gusts of 79 mph with peak gusts of 84 mph.
- **2014 (Dec 11):** An incoming front on 12/10/14 brought strong winds to many parts of southern Oregon and northern California. A rapidly developing low pressure system behind the first front brought another round of high winds on 12/11/14. Both of these events were covered by a long duration High Wind Warning. Peak gusts of 117 mph. ODOT reported that a truck was blown over on Highway 140 near Meridian Road.
- **2015 (Feb 5-6):** The Medford Mail Tribune reported numerous trees down across southern Jackson County. There were power outages due to trees falling across power lines. A falling tree fell on a house and car in Ashland, damaging both. Peak gust of 124 mph.
- **2015 (Feb 7):** The second in a series of fronts brought strong winds to many areas in Southern Oregon. Peak gusts of 116 mph.
- **2015 (Feb 8-9):** The third in a series of fronts brought strong winds to many areas in Southern Oregon. Peak gusts of 94 mph.
- **2015 (Dec 3):** A strong front brought high winds to parts of southwest and south central Oregon. Peak gusts of 107 mph.
- **2015 (Dec 5-21):** A series of 5 distinct windstorm events impacted many regions in Southwest and south central Oregon. Peak gusts ranged from 76-88 mph.
- **2016 (Jan 16):** Another in a series of cold fronts brought high winds to portions of the southern Oregon coast and the higher terrain of the Cascades and Siskiyou. Peak gusts of 82 mph.
- **2016 (Jan 19):** Another in a series of cold fronts brought high winds to portions of the southern Oregon coast and the higher terrain of the Cascades and Siskiyou. Peak gusts of 102 mph.
- **2016 (Jan 21-22):** The peak gust was 92 mph recorded at 2200 PST. Earlier that evening, strong winds were reported at Mount Ashland ski park. Kids were blown over in the parking lot. A ski lift was also closed due to winds. A chaperone stated that this was the first time he has ever been scared for the safety of skiers and snowboarders at Mount Ashland due to the weather.
- **2016 (Feb 17):** One of the last of a series of fronts brought high winds to portions of southwest and south central Oregon. Peak gust of 79 mph.

- **2016 (Feb 19):** The last of a series of fronts brought high winds to portions of southwest and south central Oregon. Peak gust of 91 mph.
- **2016 (Mar 1):** A strong front brought high winds to portions of southwest and south central Oregon. Peak gust of 87 mph.
- **2016 (Apr 13):** Central Point reported a measured gust to 45 mph. A storage shed on the property was blown apart by the winds. Large branches down. A spotter in Applegate reported 2 inch branches coming off of trees. Winds were estimated gusting to 45 mph. An estimated 998 customers were without power.
- **2019 (Nov 25):** A strong low pressure system brought high winds with gusts recorded at Medford airport of 58 mph. High Wind Warning and Winter Storm Warning combined for areas of southern Oregon with winds, snow, winter weather, downed trees and power outages.

4.11.3 Probability

Wind speed probabilities for Central Point and Southern Oregon are shown in Table 4-4. Wind speeds are for structures 33-feet above the ground with return periods of 25, 50 and 100 years.

Table 4-4: Probability of Severe Wind Events

	25-Year Event (4% annual probability)	50-Year Event (2% annual probability)	100-Year Event (1% annual probability)
Region 4: Southwest Oregon (incl. Central Point)	60 mph	70 mph	80 mph

Source: Oregon Natural Hazard Mitigation Plan (2015)

Based on the available data, the Advisory Committee assessed the probability of experiencing a local wind storm as “**high**,” meaning one incident is likely within the next 10 to 35 years. *This rating has increased since the previous NHMP.*

4.11.4 Vulnerability

While Oregon and the Pacific Northwest are vulnerable to strong cyclone-based windstorms, the combination of vegetation, climate and terrain serve to increase the impacts of wind-related damages⁴⁷. Falling trees can damage buildings, down power lines, block roads and transportation corridors. Trees are more likely to blow over during the winter when the ground is saturated, the time of year when windstorms are more likely to occur.

Central Point’s location within the central part of the Rogue Valley, away from heavily forested areas, and the lack of direct impacts from past wind events, the Advisory Committee rated Central Point as having a “**low**” vulnerability to windstorm hazards, meaning less than 1% of city population and property

⁴⁷ [Clifford Mass and Brigid Dotson](https://journals.ametsoc.org/doi/full/10.1175/2010MWR3213.1) Department of Atmospheric Sciences, University of Washington, Seattle, Washington) <https://journals.ametsoc.org/doi/full/10.1175/2010MWR3213.1>

will be affected by an “average” occurrence of wind storms. *This rating has increased since the previous NHMP.*

4.11.5 Community Hazard Issues

Impacts from windstorms include direct and indirect damages to buildings, fallen trees, downed utility lines, blocked roads and streets, and windborne debris in yards, parks and other areas of the City.

High winds impact buildings with both positive and negative pressures⁴⁸. Positive pressures are aimed directly at the structure, pushing on walls, windows and doors. Negative pressures are created by passing winds that create lift and suction and pulls on building components as it goes by. Wind speeds also increase with height, creating greater wind loads for taller, multi-story buildings.

Manufactured homes are at risk from direct damages to home and indirect damages when failures occur from damage sustained to the home’s anchoring⁴⁹. Attachments to the home, such as porches and carports, increase the risk to manufactured homes by stressing the connections and weakening the home’s ability to withstand wind impacts. In 2019, manufactured homes accounted for 2% of the housing units in Central Point, special attention should be given to securing these types of structures.

Whereas the risks within Central Point are fairly uniform due to limited topographic relief, the effects of windstorms can extend beyond city limits. Roads blocked by fallen trees, downed utility lines or other debris can impact emergency responses and affect travel and commerce throughout the Rogue Valley.

⁴⁸ Tom Smith, “Wind Safety of the Building Envelope,” Whole Building Design Guide. 15 June 2017 < <https://www.wbdg.org/resources/wind-safety-building-envelope>>

⁴⁹ Federal Emergency Management Agency, Understanding and Improving Performance of New Manufactured Homes During High-Wind Events, 2007.

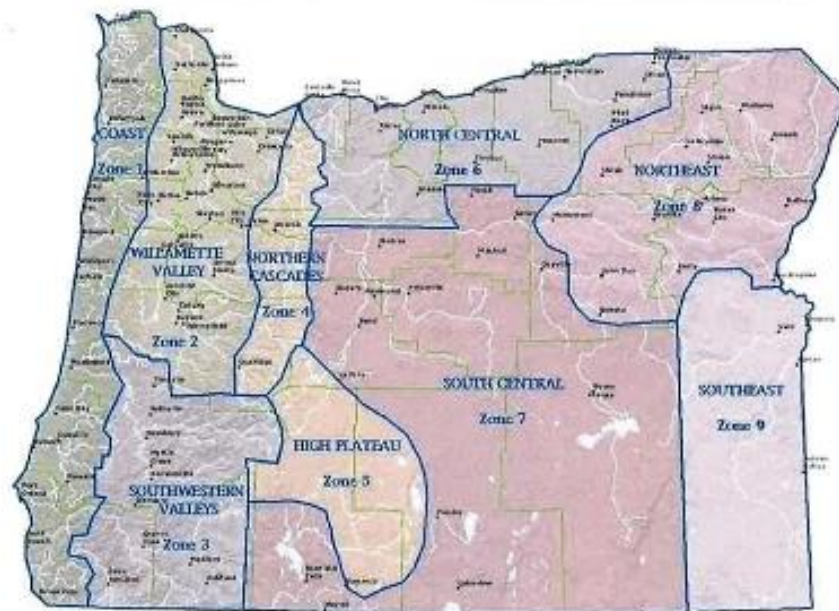
4.12 Winter Storm Hazard Data

Winter storms in Central Point can take many forms and produce various types of precipitation, but generally include temperatures low enough that snow or sleet occur, or ground temperatures low enough to allow ice to form and accumulate. The storms start as large cyclonic low-pressure systems that move in from the Pacific Ocean. These storms are not local events and can affect large portions of Oregon and/or the Pacific Northwest.

4.12.1 Location and Extent

The National Climate Data Center has established climate zones for areas that have similar temperatures and precipitation characteristics and Oregon is divided into 9 separate climate zone⁵⁰s. As shown in Figure 4-14, Central Point is located in Zone 3: Southwestern Valleys. Most precipitation in this zone falls from November to March and the winter months can be marked by snow, ice storms and extreme cold.

Figure 4-13: Oregon Climate Zones



Source: Oregon Climate Service

Snow falls nearly every winter in southwestern Oregon, and the area can experience from 20 to 30 inches per year. Average snowfall in Central Point is only about 7-inches annually. There have been 5 years where in excess of 20 inches of snow fell within the City, with the greatest total, 31-inches, occurring in the winter of 1955-1956. Over the past 20 years, the average snowfall is only 2.3-inches. There have been 8 years where no recorded snowfall occurred.

Central Point also experiences ice accumulation through sleet and freezing rain. Sleet is rain that freezes before it hits the ground and freezing rain is rain droplets that freeze once they contact a cold surface. For

⁵⁰ George H. Taylor and Alexi Bartlett, "Climate Zone 3: Southwest Interior," in The Climate of Oregon (Corvallis, Oregon: Oregon State University. Oregon Climate Service. March 1993).

Central Point, ice thickness from a 50-year freezing rain event is approximately 0.25-inches, the point where damage to utility lines and trees occurs⁵¹.

4.12.2 History

Winter storms occur yearly in Central Point and are characterized with rain, freezing rain, ice, snow, cold temperatures and wind. Snow accumulations are generally low and typically do not cause significant damage; however, they are frequent and have the potential to impact economic activity. The Jackson County NHMP⁵² recognizes seven (7) significant winter storm events, as listed below:

- **2012 (Dec 20 – Dec 21):** A long lasting winter storm occurred during this interval, caused by a series of closely spaced storms. Trail and Ashland reported 6.5 inches of snow in 24 hours while Gold Hill reported 5.9 inches in 24 hours. Significant snow was reported in the mountains during this period, causing numerous highway closures including Interstate 5 through Siskiyou Summit.
- **2013 (Dec 6 – Dec 7):** A long lasting winter storm occurred during this interval, caused by a series of closely spaced storms. The communities of Gold Hill, Trail, Eagle Point, Phoenix, Ashland, Rogue River, Shady Cove, Ruch, White City, Butte Falls and Prospect reported between 3.5 and 14 inches of snow within 24 hours. Multiple vehicle accidents resulting from winter conditions occurred along Old Highway 99 from Grants Pass to Gold Hill and on Highway 62 from Medford to Eagle Point.
- **2014 (Jan 11):** A strong front brought strong winds and heavy snow to portions of the southern Oregon Cascades.
- **2015 (Nov 24 – Nov 25):** The first big winter storm of the season brought heavy snow to some locations in southern Oregon.
- **2015 (Dec 12 – Dec 13):** A series of systems brought heavy precipitation to southern Oregon. The communities of Applegate, Phoenix, Medford, Ashland and Butte Falls reported between 3 and 9 inches of snow within 24 hours. Numerous power outages were reported around the county and area roads were closed due to snow and fallen trees.
- **2015 (Dec 21 – Dec 24):** A series of storms made for a long lasting winter storm over southwest and south central Oregon. At first, the snow was limited to higher elevations but lowered with time to some of the west side valley floors.
- **2016-2017 (Dec.-Jan):** A series of storms impacted the Rogue Valley including high winds, ice, freezing temperatures, and snow accumulation of 12-24 inches in parts of the valley floor.

⁵¹ American Lifelines Alliance. (2004). Extreme ice Thicknesses from Freezing Rain. Retrieved from <http://americanlifelinesalliance.com>

⁵² Jackson County Emergency Management, Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan, 2018

4.12.3 Probability

From the Jackson County NHMP:

The recurrence interval for a moderate to severe winter storm is about once every year; however, there can be many localized storms between these periods. Severe winter storms occur in western Oregon regularly from November through February. Jackson County experiences winter storms a couple times every year, to every other year (2018)⁵³.

Based on the available data and research, the Advisory Committee determined the probability of experiencing a winter storm in Central Point is **“high,”** meaning one incident is likely with the next 10 to 35 years period. *This rating has not changed since the previous NHMP.*

4.12.4 Vulnerability

The most likely impacts to Central Point from winter storms are road closures limiting access to/from some areas, especially roads to higher elevations, power outages from downed transmission lines, and damages to structures from tree falls. Central Point’s location at lower elevation and the limited number of events directly impacting the City, the Advisory Committee rated Central Point as having a **“low”** vulnerability to winter storm hazards, meaning less than 1% of city population and property will be affected by an “average” occurrence of winter storms. *This rating has not changed since the previous NHMP.*

4.12.5 Community Hazard Issues

The damaging effects of winter storms extend beyond the limits of Central Point and have impacts for the entire region. The closure or delays along the I-5 corridor can adversely impact the economy locally, regionally and statewide.

Additional hazard risks are examined in the Jackson County NHMP:

Winter storms which bring snow, ice and high winds can cause significant impacts on life and property. Many severe winter storm deaths occur as a result of traffic accidents on icy roads, heart attacks may occur from exertion while shoveling snow and hypothermia from prolonged exposure to the cold. The temporary loss of home heating can be particularly hard on the elderly, young children and other vulnerable individuals.

Property is at risk due to flooding and landslides that may result if there is a heavy snowmelt. Additionally, ice, wind and snow can affect the stability of trees, power and telephone lines and TV and radio antennas. Downed trees and limbs can become major hazards for houses, cars, utilities and other property. Such damage in turn can become major obstacles to providing critical emergency response, police, fire and other disaster recovery services.

Severe winter weather also can cause the temporary closure of key roads and highways, air and train operations, businesses, schools, government offices and other important community services. Below freezing temperatures can also lead to breaks in un-insulated water lines serving schools, businesses, industries and individual homes. All of these effects, if lasting more than several days, can create significant economic impacts for the affected

⁵³ Jackson County Emergency Management, NHMP (2018).

communities and the surrounding region. In the rural areas of Oregon severe winter storms can isolate small communities, farms and ranches (2018)⁵⁴.

⁵⁴ Jackson County Emergency Management, NHMP (2018)

4.13 Volcano

Significant Changes since Previous NHMP:

This section was expanded to include vulnerability and has also been reformatted.

The eastern boundary of Jackson County is along the crest of the Cascade Mountains, which run from British Columbia into northern California. The mountain chain contains more than a dozen volcanoes and hundreds of smaller volcanic features. In the past 200 years, seven of the volcanoes in the Cascades have erupted, including Mt. Baker, Glacier Peak, Mt. Rainier, Mount St. Helens, Mt. Hood, Mt. Shasta and Mt. Lassen. The most recent eruption occurred on Mount St. Helens in 1980.

4.13.1 Location and Extent

According to the Oregon NHMP,

Southwest Oregon communities are close to several prominent volcanic peaks, one of which is a national park (Crater Lake). The other peaks include Mount Bailey (elevation 8,363 ft.), Mount Thielsen (9,182 ft.), and Mount McLaughlin (9,495 ft.). Of the three, Crater Lake (6,178 ft.) may pose the greatest risk. It is a caldera and the remnant of a mountain (Mount Mazama) that probably had an elevation between 10,800 and 12,000 ft. The massive eruption, which produced the caldera, took place about 7,700 years ago. The long history at Mount Mazama strongly suggests that this volcanic center will be active in the future (Bacon, Mastin, Scott, & Nathenson, 1997). The presence of the lake means that any future eruption likely will be violent; there are many examples of explosive activity brought about by magma coming into contact with water (2015)⁵⁵.

Populations living near volcanoes are most vulnerable to volcanic eruptions and lava flows. The primary danger around a volcano is generally within a 20-mile radius; although, large explosive eruptions can endanger people and property hundreds of miles away, primarily through ash fallout. Given the distance to potentially active volcanoes in the Cascades, the risks to Central Point would primarily be through secondary impacts of ash fallout that could contaminate the water supply, cause electrical storms, create health problems and collapse roofs.

4.13.2 History

According to the 2011 Hazard Mitigation Plan:

Over the past 4,000 years in Oregon - a geologically short time period - there have been three eruptions of Mt. Hood, four eruptions in the Three Sisters area, two eruptions in the Newberry Volcano area and minor eruptions near Mt. Jefferson, at Blue Lake Crater, in the Sand Mountain Field, near Mt. Washington, and near Belknap Crater. During this time period, the most active volcano in the Cascades has been Mount St. Helens in Washington State with about 14 eruptions (2011)⁵⁶.

There has been no recent volcanic activity near Central Point.

⁵⁵ Oregon DLCD, 2015

⁵⁶ City of Central Point, 2011

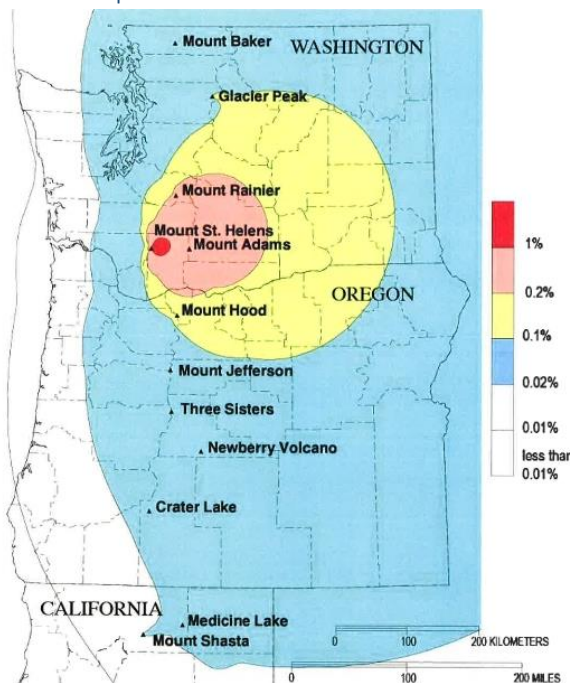
4.13.3 Probability

The probability of a volcanic eruption is based on past activity at a specific volcano. Monitoring can determine the frequency, magnitude and type of eruptions that have occurred, as well as, the current background level of activity. Changes in activity at a volcano can forewarn of an upcoming event. The 1980 eruption on Mount St. Helens was preceded by a period of small earthquakes.

As described in the 2015 Oregon NHMP, return periods for ashfall from the Cascade Range are estimated by the USGS and shown in the map below, Figure 4-14. These maps predominantly reflect volcanic eruptions at Mount St. Helens, with 1 in 3 probability, because this volcano is much more active than the other volcanoes in the Cascades. Mount Rainier and Mount Hood are in the 1 in 15 probability range. These maps also show other mountains that are closer to Central Point. The map indicates an annual probability of approximately 0.01-percent for accumulation of 1 centimeter (about 0.4 inch) or more of volcanic ash.

The Advisory Committee assessed the probability of experiencing a volcano hazard in Central Point a “low” probability, meaning one incident is likely within the next 75 to 100 years. *This rating has not changed since the previous NHMP.*

Figure 4-14: Probability of Accumulation of 1 Centimeter (0.4 inch) or more of tephra from eruptions of Volcanoes in the Cascade Range.



Source: USGS Open-File Report 98-428 (1998)⁵⁷

⁵⁷ Hoblitt, R.P., et.al. 1998. Volcano Hazards from Mount Rainier, Washington, Revised 1998: U.S. Geological Survey Open-File Report 98-428 Map Plate 2

4.13.4 Vulnerability

Based on the available information, the Advisory Committee rated Central Point as having a “**low**” vulnerability to volcanic hazard, meaning that less than 1% of the City’s population or assets would be affected by a major disaster. *This rating has not changed since the previous NHMP.*

4.13.5 Community Hazard Issues

There are no active volcanoes located in Jackson County, and Central Point is far enough from active volcano areas to not be at risk from lava flows. Impacts to Central Point are primarily through secondary impacts from ash fallout. Though unlikely, the impacts could be significant to the local water supply, create health problems and collapse roofs of vulnerable structures. There is currently no analysis to determine the numbers and types of buildings, including critical facilities, in the City that would be vulnerable to a volcanic eruption.

4.14 Wildfires

Significant Changes since Previous NHMP:

A significant wildfire event within City limits occurred since the previous NHMP.

Jackson County and Josephine County completed a joint Community Wildfire Protection Plan that updated the limits of the Wildland-Urban Interface in both counties.

Wildfires, also referred to as wildland fires or forest fires, are uncontrolled fires where vegetation, including grasses, brush and trees, are the primary fuels of the fire. These fires become a risk when development encroaches into wildland area. The increase of development into the interface, or the Wildland-Urban Interface (WUI), results in greater wildfire risks through limited services like water supplies and suppression capabilities, as well as other factors like the absence of fire-safe construction practices and limited access to/from high-risk areas.

Fires may be started by natural causes, such as lightning, or human causes, either intentionally or unintentionally. Once started, there are three (3) main factors that contribute to fire behavior, including vegetation/fuel loads, weather and topography.

- Fuel is the material that feeds a fire and is classified by volume and type. Certain types of plants are more susceptible to burning or will burn with greater intensity. Fire intensity can increase with the abundance of dense or overgrown vegetation, a higher ratio of dead plant matter compared to living vegetation, and the amount of moisture content found in the vegetation.
- Topography influences the movement of air and directs a fire's course. Steeper slopes can increase the spread as warm air currents travel uphill.
- Weather is the most variable factor. Temperature, humidity, wind and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity.

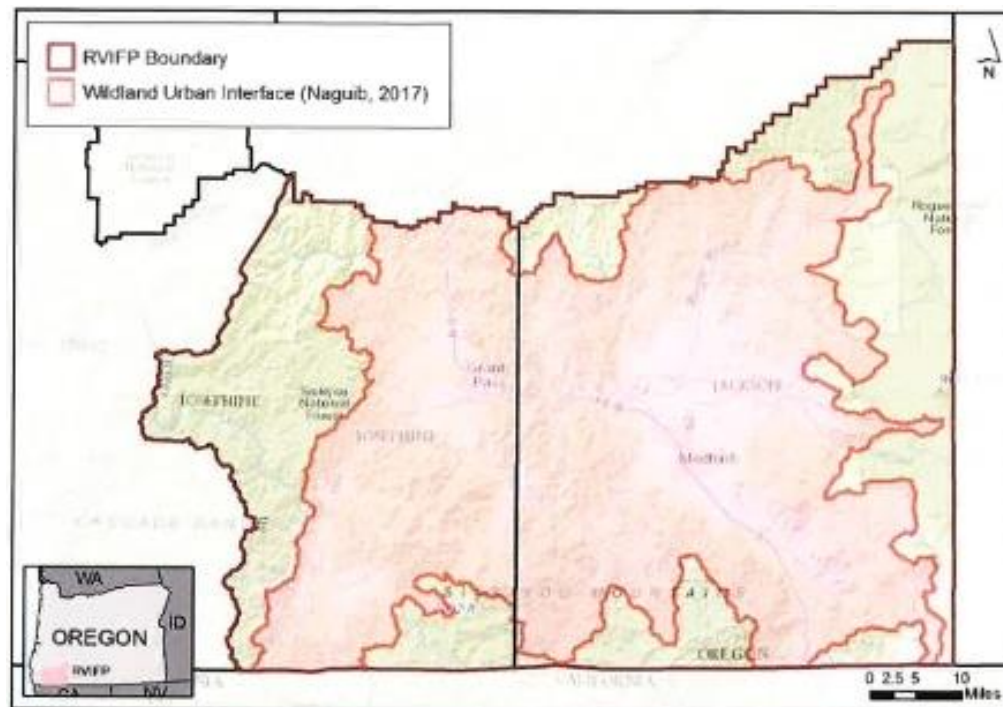
4.14.1 Location and Extent

Areas with the greatest risk to experience loss from a wildfire are the areas where development and structures encroach into wildlands that are prone to wildfires. Central Point was originally thought to be outside of a WUI, as reflected in the low level of risk identified in the 2011 Hazard Mitigation Plan.

In 2017, Jackson and Josephine Counties completed a joint Community Wildfire Protection Plan (CWPP) that updated the WUI for both counties in the RVIFP, 2017⁵⁸. The CWPP process is designed to identify and prioritize areas for wildfire prevention and response efforts. The updated the WUI is shown in Figure 4-15.

⁵⁸ Rogue Valley Integrated Community Wildfire Protection Plan, (2017).

Figure 4-15: RVIFP Wildland Urban Interface



Source: Rogue Valley Integrated Community Wildfire Protection Plan, 2017

The updated WUI includes many urban and densely populated areas within Jackson and Josephine Counties. As noted in the 2017 RVIFP:

Though many non-vegetated expanses do exist within metropolitan areas (shopping malls, roads, parking lots, downtown sections, municipal and urban buildings, etc.) the vast majority of Rogue Valley metropolitan areas and urban structures are located within $\frac{1}{4}$ mile or less of wildland areas. Wildfires create airborne burning embers that can travel $\frac{1}{2}$ mile or more from the fire. Structures, particularly those closely-spaced, as found in urban settings, are extremely vulnerable to ignitions from burning embers, and the spot fires created by burning embers (2017)⁵⁹

Through the CWPP process, the Counties and the work group could define a WUI based on zoning and focus fuel treatments where people live, or are likely to live. The mix of public and privately-owned wildlands can make meaningful mitigation difficult. As the 2017 RVIFP notes: “To provide sufficient fire protection for the population center, it is essential for wildfire planning efforts to include metropolitan areas within the WUI boundaries, to ensure adequate suppression resources are available.”(2017)⁶⁰

4.14.2 History

In July of 2018, a fast-moving grass fire started along the Bear Creek Greenway near the east side of Central Point. The wildfire, named the Peningen Fire, started near Jackson County Expo property, burned along the greenway before it rapidly moved east along Peningen, Biddle and Hamrick Roads. Figure 4-16

⁵⁹ Rogue Valley Integrated Community Wildfire Protection Plan (2017).

⁶⁰ Rogue Valley Integrated Community Wildfire Protection Plan (2017).

shows the fire's path that burned approximately 97 acres, singed 3 homes, destroyed 5 outbuildings and damaged another outbuilding⁶¹.

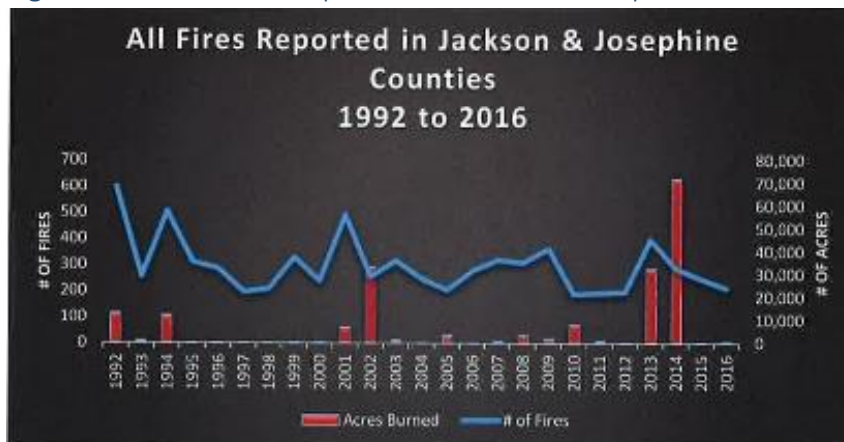
Figure 4-16: Peninger Fire Map



Source: The Wild Coast Compass⁶²

Outside Central Point city limits, Jackson County has experienced a large number of wildfires throughout history. As part of the RVIFP, the CWPP examined fire history from 1992-2016 for Jackson and Josephine Counties. Using data from the United States Forest Service (USFS) and Oregon Department of Forestry (ODF), there were an average of 296 wildfires per year, with an average of 7,808 acres burned⁶³. As shown in Figure 4-17, the numbers of wildfires ranged from 186 to 598 per year.

Figure 4-17: Wildfires Report in Jackson and Josephine Counties



Source: RVIFP (2017)

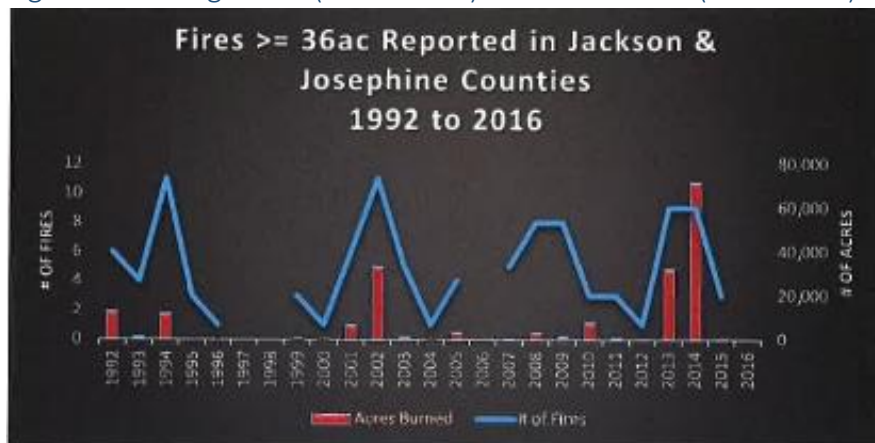
⁶¹ Nick Morgan, "Body Found in Burned Area of Central Point Fire," Mail Tribune, 19 July 2018.

⁶² The Wild Coast Compass, www.wildcoastcompass.com

⁶³ Rogue Valley Integrated Community Wildfire Protection Plan, (2017).

Despite the large number of fires ignited annually, only a small portion of those reached 36 acres or greater (about 64 fires since 1992) showing that most fires are successfully suppressed after the initial attack. As noted in the 2018 Jackson County NHMP, the majority of fires are started along travel corridors and the edges of urban areas; however, the fires that grow to burn a large number of acres are located near more remote areas (see Figure 4-18).

Figure 4-18: Large Fires (≥ 36 acres) Fire Occurrence (1992-2015)



Source: RVIFP (2017)

4.14.3 Probability

According to the 2018 Jackson County NHMP,

Certain conditions must be present for significant interface fires to occur. The most common are hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel, topography, weather, drought and development. Many of these conditions are demonstrated across large areas within Jackson County, creating a significant collective risk (2018).⁶⁴

The Advisory Committee assessed the probability of experiencing a wildfire hazard in Central Point a “**high**” probability, meaning one incident is likely with the next 10-35 years. Based on the available information, the Oregon NHMP Regional Risk Assessment supports this probability rating for Central Point. *This rating has increased since the previous NHMP.*

4.14.4 Vulnerability

The Advisory Committee rated Central Point as having a “**moderate**” vulnerability to wildfire hazard, meaning that between 1-10% of the City’s population or assets would be affected by a major disaster. *This rating is an increase since the previous NHMP.*

⁶⁴ Jackson County Emergency Management, Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan, 2018

4.14.5 Community Hazard Issues

Southern Oregon, including Central Point and the surrounding areas of Jackson County, are identified in the 2015 Oregon NHMP as one of the regions in the state most susceptible to wildfires. This vulnerability assessment is the result of a high percentage of wildland acres subject to fire risk, smaller communities within the WUI, high summer temperatures, rugged terrain and the likelihood of summer thunderstorm activity (Oregon DLCD, 2015)⁶⁵.

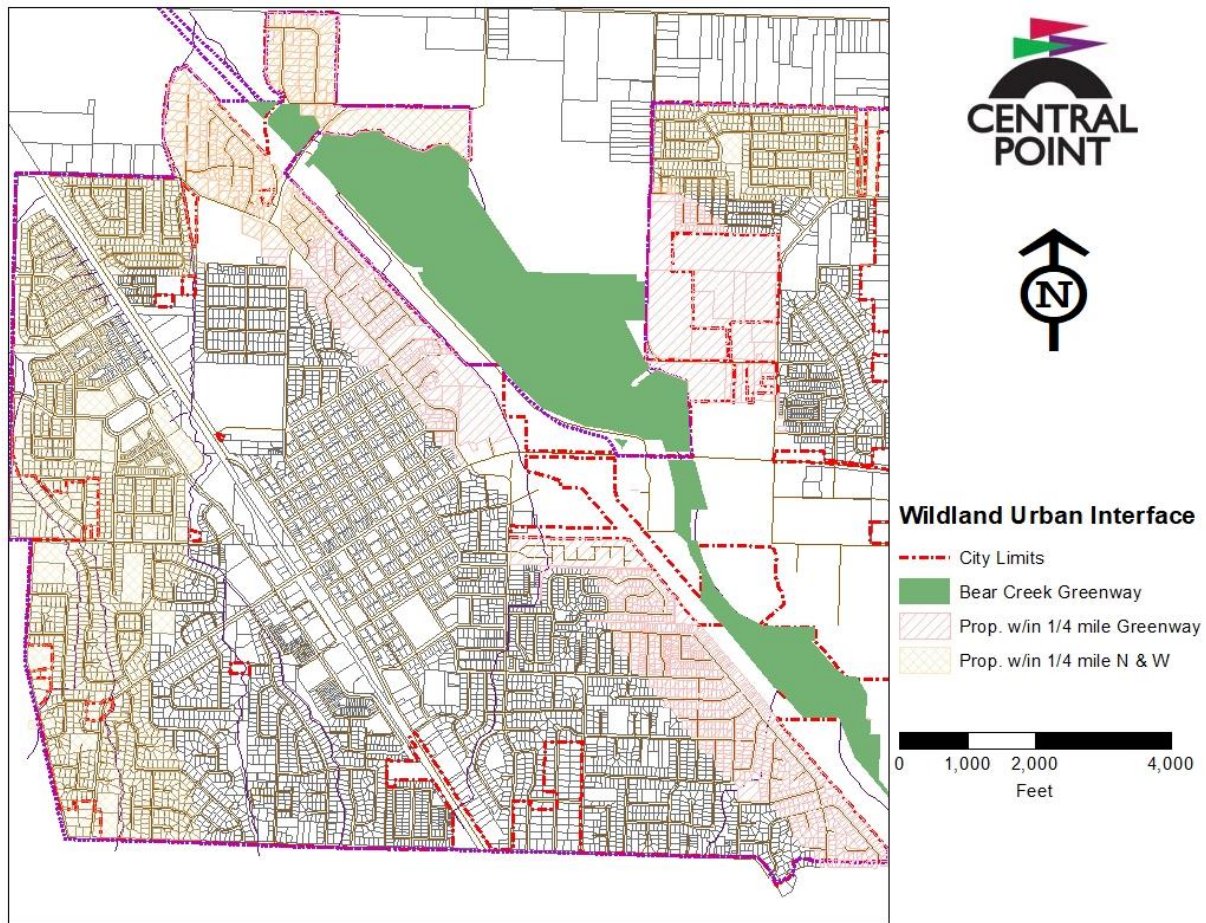
Ignition sources are generally concentrated along travel corridors and at the edges of urban areas (RVIFP 2017)⁶⁶. Debris-burning, equipment use and even arson contribute to wildfire ignition sources. Central Point is bounded by rural areas on the west and north. There are several travel corridors that connect the City to these areas, and north-south stream corridors, including the Bear Creek Greenway (the origin of the 2018 Peninger Fire) that connect the City to the WUI and sources of wildland fires.

As noted above, metro areas within ¼-mile of wildlands are vulnerable to risks of wildfires. Areas of Central Point within ¼-mile of wildlands, including the Bear Creek Greenway and the “metro edge” are shown in Figure 4-19. There are approximately 1,170 residences within ¼-mile of the Bear Creek Greenway, 1,970 residences within ¼-mile of the “metro edge” along the north and west sides of the City. There are several critical facilities within the wildfire risk area, including the new Scenic Fire Station along Scenic Avenue.

⁶⁵ Oregon Department of Land Conservation and Development (DLCD), Oregon Natural Hazards Mitigation Plan, 2015.

⁶⁶ Rogue Valley Integrated Community Wildfire Protection Plan, (2017).

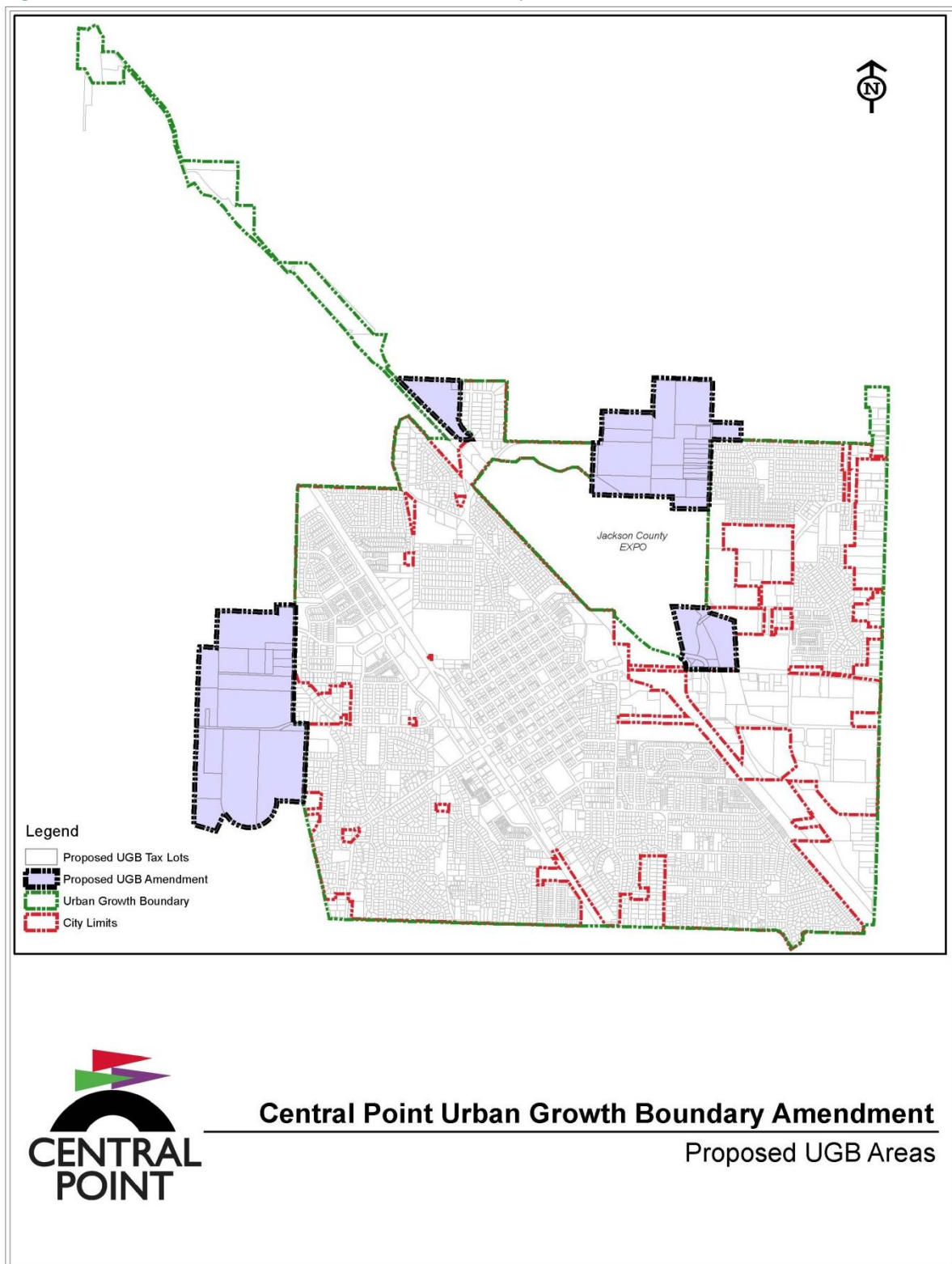
Figure 4-19: Central Point Wildfire Risk Areas



Source: Central Point Planning Department

The expected increase in population necessitates the expansion of City limits, and ultimately, urban-type development and densities into current rural areas. Areas proposed for growth, to the west and north of the current City boundaries (see Figure 4-20), are also areas currently within a certain level of risk for wildfires. While densities will increase in these areas, services and responses, such as access routes, emergency response from the new fire station, and water supplies, will increase commensurately. It is anticipated that the level of risk to wildfires will stay the same in these areas.

Figure 4-20: Central Point Urban Growth Boundary Amendment



Source: Central Point Planning Department

5 Mitigation Strategy

44 CFR §201.6(c)(3): [The plan shall include] a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

44 CFR §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

44 CFR §201.6(c)(3)(ii): [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure

44 CFR §201.6(c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

5.1 Overview

The purpose of this chapter is to identify a strategy to reduce impacts and potential losses identified in the City's risk assessment (See Chapter 4). Reducing the vulnerability to disasters and enhancing the capability of the City and its citizens to respond effectively and recover quickly, makes the City more disaster resistant and disaster resilient. As part of the 2020 plan update, the goals and objectives from the 2011 plan were revisited, reaffirmed and refined. The updated plan reflects the updated risk assessment and the City's progress in mitigation efforts.

5.2 Mission Statement

The mission of the Central Point Hazard Mitigation Plan is to:

Facilitate and support policies, practices and programs that make Central Point more disaster resistant and disaster resilient.

The Advisory Committee reviewed the mission statement from the 2011 plan and agreed that it continues to support the purpose and intent of the updated plan. The mission statement was refreshed and stated as shown above.

5.3 Mitigation Plan Goals

The mitigation plan goals guide future policies and activities aimed at reducing risk and preventing loss from natural disasters. The goals listed here also explain what the City aims to achieve with the Natural Hazard Mitigation Plan (NHMP).

As part of the 2020 updated plan, the Advisory Committee reviewed the 2011 plan goals in comparison to the Oregon NHMP goals and determined that minor revisions would align with the existing goals the State's mitigation plan goals.

Goal 1: Protect Life Safety

Protect life and reduce injuries resulting from natural hazards.

Goal 2: Protect Property

Identify buildings and infrastructure at risk from natural hazards, determine cost effective mitigation actions, implement measures to mitigate risks and ensure that all new and reconstructed buildings and infrastructure are designed to minimize damages in future disasters.

Goal 3: Enhance Emergency Response

Enhance emergency planning to facilitate effective response and recovery from future disaster events.

Goal 4: Improve Education and Outreach

Improve public awareness of the risks from natural hazards by providing information on resources, tools, partnership opportunities and funding sources to assist the community in implementing mitigation activities.

Goal 5: Enhance Partnerships

Develop and enhance partnerships with public agencies, non-profit organizations, businesses, industry and the general population to mitigate natural hazards.

Goal 6: Integrate Natural Resources Protection

Balance natural resources management, land use planning and natural hazard mitigation to rehabilitate, restore and protect natural systems to serve natural hazard mitigation functions.

Goal 7: Pursue Funding for Mitigation Activities

Continue to seek federal, state and local funds and increase the funding amounts dedicated to implementing affordable natural hazard mitigation strategies.

5.4 Mitigation Actions

Mitigation actions are the specific projects and activities designed and implemented to reduce the effects of natural hazards on Central Point. Losses from hazards can be reduced if preemptive construction action is taken before a disaster strikes. Each action item helps the City achieve the mitigation plan goals by reducing vulnerability to disasters and their negative impacts, and enhancing the capability of the City to respond and recover quickly from future disasters.

5.4.1 Development

Action items were developed to address the vulnerabilities and risks from each hazard Central Point. The Advisory Committee started with the action items developed during the previous NHMP planning process, and considered new options as the action plan was reviewed and analyzed in comparison to the mission, goals and updated risk assessment. In order to assure a comprehensive range of actions, specific items were developed for each hazard.

All mitigation action items were identified in relation to the goals and objectives above and included a range of options in line with the six types of mitigation actions described in FEMA guidance⁶⁷, including:

- **Prevention:** Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, floodplain regulations, capital improvement programs, open space preservation, and storm water management regulations.

⁶⁷ Federal Emergency Management Agency, Developing the Mitigation Plan. 2003, 2-1

- **Property Protection:** Actions that involve either the modification of existing buildings or structures to protect them from a hazard or the removal of structures from hazard areas. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness:** Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- **Natural Resource Protection:** Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Service:** Actions that protect people and property, during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.

5.4.2 Process

Once a list of mitigation actions was developed, the Advisory Committee evaluated and prioritized the items that are most suitable for Central Point to implement (refer to Table 5.2).

5.4.2.1 Benefit-Cost Review

FEMA requires that the prioritization of mitigation action items include a review of the benefits versus the costs⁶⁸. Central Point utilized benefit-cost analysis to prioritize mitigation action items by evaluating available resources compared to the expected costs and the relative effectiveness of the action item. The comparison of the benefits versus the costs associated with each mitigation action item followed a Simple Listing process where the advantage of each action was compared to any disadvantages. An evaluation through the Simple Listing process assigns a priority for each action based on criteria determined by the Advisory Committee. This process was selected because not all costs are monetary, the benefits and costs may not be easy to quantify, and costs may change for long-term projects that are not implemented for up to 10 years.

5.4.2.2 Evaluation Criteria

The Advisory Committee recognized the regulatory requirement to prioritize the action items by benefit-cost review to ensure cost-effective solutions. They also chose to focus on mitigating specific hazards,

⁶⁸ Federal Emergency Management Agency. Local Mitigation Planning Handbook, 2013. 5-1

achieve the goals and objectives of the Plan, balance the timing of implementation, and estimate costs for overall prioritization.

5.4.2.2.1 Timeline

Each action developed for this plan contains a timeline for implementation, including both short-term and long-term activities. The parameters for the timeline are as follows:

- **Ongoing:** Currently being funded and implemented under existing programs.
- **Short-Term:** To be completed in 1 to 3 years.
- **Long-Term:** To be completed in greater than 3 years.

5.4.2.2.2 Estimated Cost

Where possible, an estimate of the cost for implementing the action is included. Cost review and estimates does not include the level of detail necessary for grant eligibility because the costs for long-term projects could change dramatically by the time they are implemented.

5.4.2.2.3 Priority

The next step in the evaluation was item prioritization in order to clarify the importance of these mitigation actions. The Advisory Committee developed a prioritization ranking to identify the actions that are most achievable, has resource availability, and is considered a high leverage activity. The parameters for priority are as follows:

- **High Priority:** A project that meets multiple plan goals and objectives, benefits exceed costs, has secured funding under existing programs, and can be completed in short-term time period.
- **Medium Priority:** A project that meets at least one goal and/or objective, benefits exceed costs, funding is not secured or would require special funding, and can be completed within 5 years once funding is secure.
- **Low Priority:** A project that will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, and/or the timeline for completion is considered long-term.

5.5 Progress/Updates to Previous Actions

As part of the Hazard Mitigation Plan update, the Advisory Committee reviewed and evaluated the mitigation strategy from the 2011 plan to determine the status of the actions. The purpose of this was to determine which actions were completed and determine which of the remaining actions, if any, should be continued, revised or removed from the plan. Table 5.1 shows action items from the 2011 plan that have been completed.

Table 5.1: Completed Mitigation Action Items from 2011 Plan

Hazard	Action Item	Status	Comments/Progress
Multi-Hazard	Identify critical facilities and infrastructure in Central Point that	Completed	Central Point Public Works and Planning have worked

	are at risk for one or more natural hazards and implement mitigation measures as resources become available.		with other agencies to identify and map critical facilities and infrastructure within the City.
Earthquake	Evaluate the seismic vulnerability of critical city-owned buildings and establish priorities to retrofit or replace vulnerable buildings.	Completed	Critical facilities screened as part of DOGAMI Rapid Visual Screening. No city-owned buildings are at seismic risk.
Flood	Complete a Stormwater Master Plan for the City	Completed	The Stormwater Master Plan is completed, identifies problem areas and incorporates the Griffin Creek Mitigation Plan.
Flood	Complete an outreach strategy for the community in accordance with CRS procedures	Completed	The outreach program is completed and ongoing to maintain compliance with CRS.
Severe Weather	Formalize the City's Community Forestry Program to organize tree management efforts	Completed	The City is recognized as a "Tree City USA" for the formalized tree program.
Severe Weather	Require new developments to include undergrounded power lines	Completed	As part of project approval and development, underground power lines are required.

5.5.1 NFIP Compliance

An important aspect of the Natural Hazard Mitigation Plan is to identify and implement mitigation actions that maintain consistency and compliance with existing efforts and requirements. Flood Insurance Rate Maps (FIRM) were first published for the City in 1980 and Central Point began participating in the National Flood Insurance Program (NFIP) in 1982. The FIRM for Central Point was updated to include flood hazard information based on a flood study conducted by FEMA in partnership with the City. The changes to the FIRM became effective on May 3, 2011.

As a participating community in the NFIP, Central Point maintains a floodplain management program that supports community resiliency through preventive and corrective measures. Program activities include education and outreach, flood protection assistance, drainage system maintenance, open space preservation, higher regulatory standards that exceed minimum FEMA standards, and hazard mitigation planning. The program is administered by three (3) Certified Floodplain Managers (CFM) in the Planning and Public Works Department that review permits for development in the floodplain, inspect development projects, and ensure the drainage system is maintained and cleared of obstructions.

Central Point also participates in the Community Rating System (CRS), which provides additional benefits to residents through the City's flood protection measures. As of October 2019, Central Point was listed as a Class 6 community in the CRS Program due to the robust floodplain program that is in good standing with FEMA and CRS reviewers.

5.5.2 Updated Mitigation Action Plan

Action items identified and prioritized during the development of the NHMP are outlined in Table 5.2, including a description of the action item, the timeframe for implementation, the Coordinating Organizations responsible for implementation, the priority for the action, and the plan goals the action is linked to.

Action Item ID	Mitigation Action Item	Timeline	Coordinating Organizations	Estimated Cost	Priority	Plan Goals Addressed							Potential Funding Source(s)
						Protect People	Protect Property	Emergency Response	Education & Outreach	Partnership & Protection	Natural Resources	Funding	
Multi-Hazard Mitigation Items													
Short-Term #1	Encourage public and private owners of infrastructure to undertake risk assessments for their facilities and implement mitigation measures when necessary.	Ongoing	Public Works, Building Division, Fire District 3	Staff Time	Medium	X	X	X					Local Funding Resources, PDM, SRGP, HMGP
Short-Term #2	Increase public awareness of natural hazards by enhancing education and outreach activities, including dissemination of hazard maps, FEMA pamphlets and promoting the Jackson County Disaster Registry	Ongoing	Public Works, Community Development	Staff Time	Medium	X	X	X	X				Local Funding Resources
Short-Term #3	Integrate the Mitigation Plan findings into planning and regulatory documents and programs.	1-2 Years	Community Development	Staff Time	Medium	X	X	X	X	X	X		Local Funding Resources
Long-Term #1	Obtain funding and resources to implement high priority mitigation action items.	3-5 Years	Public Works, Community Development	Staff Time	Low							X	Local Funding Resources
Earthquake Mitigation Action Items													
Short-Term #1	Disseminate FEMA pamphlets to educate homeowners and business owners about structural and non-structural retrofitting options and benefits for vulnerable buildings. (Vulnerable buildings identified in Rapid Visual Screening inventory)	Ongoing	Community Development, Building Division	Staff Time	Medium	X	X		X				Local Funding Resources
Short-Term #2	Evaluate the seismic vulnerability of important components of the Central Point water and waste water systems and establish priorities to retrofit or replace vulnerable components	1-2 Years	Public Works, RVSS	Staff Time, Upgrade costs TBD	High	X	X	X	X	X	X		Local Funding Resources, SRGP, PDM
Long-Term #1	Conduct a sidewalk survey of residential, commercial and industrial buildings in Central Point using FEMA’s Rapid Visual Screening to identify especially vulnerable buildings, raise awareness and encourage mitigation actions. (unreinforced masonry buildings, concrete/steel buildings with URM infill)	1-2 Years	Community Development (Building Division)	Staff Time	High	X	X		X				Local Funding Resources, SRGP

Action Item ID	Mitigation Action Item	Timeline	Coordinating Organizations	Estimated Cost	Priority	Plan Goals Addressed							Potential Funding Source(s)
						Protect People	Protect Property	Emergency Response	Education & Outreach	Partnership & Protection	Natural Resources	Funding	
Long-Term #2	Obtain funding and retrofit important public facilities with significant seismic vulnerabilities	3-5 Years	Community Development, Building Division	Staff Time	Low	X	X		X			X	Local Funding Resources, SRGP, HMGP
Flood Mitigation Action Items: Within FEMA-Mapped Floodplains													
Short-Term #1	Maintain outreach program for the community in accordance with CRS procedures to ensure that public involvement and education efforts are effective	Ongoing	Community Development	Staff Time	Medium				X				Local Funding Resources
Short-Term #2	Upgrade West Pine Street crossing and include property owners from Mae Richardson school to Housing Authority property to improve stream flows and alleviate floodway and stream bank erosion impacts.	1-2 Years	Public Works, Community Development, Jackson County Housing Authority	Construction Costs TBD	High	X	X		X	X	X		Local Funding Resources
Short-Term #3	Mitigate low income West Pine Housing Authority, Building A & B, to reduce flood risk, comply with flood protection standards and improve insurance rating.	1-2 Years	Community Development, Jackson County Housing Authority	+\$20,000	High		X		X	X			Local Funding Resources, FMA
Long-Term #1	Griffin Creek Flood Mitigation Project including the following: stakeholder buy-in, public involvement, easement acquisition, utility relocation, engineered construction plans, restoration plans, environmental permits, grade control structure removal, channel modifications, stream restoration, LOMR acquisition	Ongoing until Completion	Public Works, School District #6, Pacific Power, RVSS, Rogue River Valley Irrigation District, Oregon State Police, and Southern Oregon Labor Temple	Staff Time, other costs TBD	M/L	X	X	X	X	X	X	X	Local Funding Resources, FMA, OWEB
Long-Term #2	Elevate or acquire highly flood-prone structures not mitigated by the Griffin Creek Mitigation Project.	Ongoing	Community Development, Public Works	TBD by individual structure value	Low	X	X	X		X	X	X	FMA

[illegible]

6 Plan Implementation & Maintenance

44 CFR §201.6(c)(4)(i), The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

44 CFR §20.6(c)(4)(ii), A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

44 CFR §20.6(c)(4)(iii), Discussion on how the community will continue public participation in the plan maintenance process.

Implementation and maintenance of the plan is critical to the overall success of hazard mitigation planning. This chapter outlines how this plan will be implemented and updated and is the conclusion of Phase 4 of FEMA's 4-phase guidance—Implement the Plan and Monitor Progress⁶⁹.

6.1 Implementation

Upon adoption of this plan, the Steering Committee, led by the Planning Department, will oversee implementation and maintenance. The primary duties of the Steering Committee in implementing the plan include:

- Act as a forum for hazard mitigation issues;
- Disseminate hazard mitigation ideas and activities to all participants;
- Report on the progress of plan implementation and mitigation actions;
- Inform and solicit input from the public;
- Keep the concept of hazard mitigation in the forefront of community decision making.

The Steering Committee members will also monitor funding opportunities to help fund and implement some of the more costly action items. Funding opportunities to be monitored include special pre- and post-disaster funds, capital improvement budgeted funds, state or federal earmarked funds, and grant programs, including those that can serve or support multi-objective applications.

Implementation extends beyond the duties and advisory nature of the Steering Committee. Each recommended mitigation action includes key descriptors, such as a lead manager and possible funding sources, to help initiate implementation. It is through the efforts of the responsible agency to promote and highlight multi-objective benefits of each project to the City of Central Point, its stakeholders and residents that will ensure implementation. Routine actions on the part of these agencies include monitoring agendas, attending meetings, and promoting a safe and resilient community.

6.2 Maintenance & Monitoring

Plan maintenance is an ongoing effort to monitor and evaluate plan implementation and to update the plan as required or changing circumstances are recognized. In order to track progress and update the mitigation strategies identified in the action plan, the Steering Committee will revisit this plan annually, or after a significant hazard event or disaster declaration. The Planning Department is responsible for initiating this review and convening members of the Steering Committee on a once yearly basis, or more frequently as needed.

⁶⁹ Federal Emergency Management Agency. Local Mitigation Planning Handbook, 2013. 1-3.

The responsible agency assigned to each mitigation action item will be responsible for tracking and reporting on each of their actions. A representative from the responsible entity will be responsible for tracking and reporting on project status and provide input on whether the project as implemented meets the defined objectives and is likely to be successful in reducing vulnerabilities. The yearly reports to the Steering Committee will serve as the basis for the next plan update.

The Disaster Mitigation Act of 2000 requires the City's plan to be updated, approved and adopted within a five-year cycle. When the Steering Committee reconvenes for the update, they will coordinate with all stakeholders participating in the planning process—including those that joined the committee since the planning process began—to update and revise the plan. It is also anticipated that the Jackson County Multi-Jurisdictional Natural Hazard Mitigation Plan will begin an update within 3 years, prior to the minimum required City update. At that time, the Planning Department will join the county-wide plan update efforts and update the City plan for inclusion in the county plan.

6.3 Incorporate into Existing Plans

Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. The City already has programs and policies to reduce losses to life and property from natural hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing projects, where possible, through these other program mechanisms. These existing mechanisms include:

- Central Point Comprehensive Plan
- Central Point Municipal Code
- Central Point Emergency Operations Plan
- Central Point Capital Improvements Plan
- Central Point Storm Drainage Master Plan
- Rogue Valley Integrated Community Wildfire Protection Plan
- Jackson County Multi-Jurisdiction Natural Hazard Mitigation Plan

Steering Committee members involved in the updates of these mechanisms and plans will be responsible for promoting the findings and recommendations of this plan with these other plans, and integrating them as appropriate.

6.4 Continued Public Involvement

Continued public involvement is also imperative to the overall success of the plan's implementation. The update process provides an opportunity to publicize success stories from the plan implementation and seek additional public comment. Multiple public meetings or workshops will be scheduled during the next update period to receive public input. The plan maintenance and update process will include continued public and stakeholder involvement and input through attendance at designated committee meetings, web postings, and press releases to local media. Public awareness of the plan and individual flood mitigation strategies could be developed each spring prior to the beginning of runoff and flood season. This can also occur in coordination with CRS public notification activities.

APPENDIX A. ADOPTION RESOLUTION

RESOLUTION NO. ____

**A RESOLUTION BY THE CITY COUNCIL OF CENTRAL POINT
ADOPTING THE 2020 NATURAL HAZARD MITIGATION PLAN**

WHEREAS, the City Council of Central Point, Oregon finds and recites the following facts related to the adoption of the Central Point Natural Hazards Mitigation Plan:

- A. The City of Central Point recognizes the threat that natural hazards pose to people and property within the community;
- B. Implementing hazard mitigation actions will reduce the potential for harm to people and property from future hazard events;
- C. An adopted, Federal Emergency Management Agency (FEMA) – approved hazard mitigation plan is a pre-requisite for mitigation project funding eligibility under FEMA pre- and post-disaster mitigation grant programs;
- D. The City of Central Point engaged in FEMA-prescribed mitigation planning process in the development of the Central Point Hazard Mitigation Plan; and
- E. The Oregon Department of Emergency Management and FEMA Region X officials have reviewed the City of Central Point Hazard Mitigation Plan and approved it contingent upon this official adoption of the participating governing body; and

NOW, THEREFORE, BE IT RESOLVED that the City of Central Point by Resolution No. ____ does hereby resolve:

Section 1: The “City of Central Point Natural Hazard Mitigation Plan” is adopted as the official plan for the City.

Section 2: The City of Central Point will submit this resolution to the Oregon Department of Emergency Management and FEMA Region X officials to facilitate final approval of this plan.

PASSED by the City Council and signed by me in authentication of its passage this ____ day of ___, 2020.

Mayor Hank Williams

ATTEST:

City Representative

Appendix B. Resources & References

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Appendix C. Process & Participation Documentation

Public Involvement

The City of Central Point is dedicated to involving the public in the planning process and incorporating public comments that help direct and improve the final plan update. The 2020 update for the Natural Hazard Mitigation Plan include three key components for public involvement:

- Develop a Steering Committee composed of knowledgeable individuals from the City and community and conduct committee meetings;
- Conduct public meetings and presentations to identify common concerns about hazards, promote hazard awareness, and discuss specific goals and action items in the mitigation plan; and
- Maintain a hazard mitigation website to provide information about the mitigation planning process and benefits of mitigation to the community, provide access to planning documents, and request public feedback.

Steering Committee

The Steering Committee met on the following dates. Agendas for each of the meetings and lists of attendees are included below.

Meeting	Meeting Topic	Meeting Date
1	Kickoff	April 1, 2019
2	Assessing the Problem/Assess the Hazard	May 20, 2019
3	Setting Goals	June 17, 2019
4	Action Items – Review Activities	August 6, 2019
5	Mitigation Strategy – Create an Action Plan	February 26, 2020
6	Plan Review & Implementation	September 29, 2020

An article in the City's newsletter, mailed to all water service customers announced the kick-off meeting of the Hazard Mitigation Plan update. Meeting schedules and agendas were also advertised on a project website maintained by the City.

A series of meetings with the Citizens Advisory Committee presented the progress on the update process and solicited feedback to incorporate into the final update. Steering Committee meetings were



Meeting Agenda

Location: City of Central Point – Sun Room

Date: April 1, 2019

Time: 2:00 PM – 3:30 PM

Agenda details:

I. Welcome and Introductions

II. Planning Process Overview

- a. Planning Objective
- b. 10-Step Planning Process (CRS)
- c. Meeting Schedule and Plan Update Timeline
- d. Public Outreach Strategy

III. Update Considerations

- a. Hazard Mitigation Plan Review (2011)
 - i. Mission Statement, Goals, Action Item Status
 - ii. Relevance of mission statement and goals
- b. Mitigation plan implementation mechanisms
 - i. Comprehensive Plan, Capital Improvement Plans, etc...
- c. New hazards to consider
 - i. New or updated studies

IV. Next Steps

- a. Citizen Advisory Committee – April 9, 2019
 - i. Public meeting to provide an overview of the existing plan and the update process
 - ii. Summarize outcome of this meeting and solicit feedback
- b. Prepare draft modifications
- c. Contact stakeholders and affected agencies
- d. Evaluate the Hazards section and identify necessary changes



Meeting Agenda

Location: City of Central Point – Sun Room

Date: May 20, 2019

Time: 10:00 AM – 11:30 AM

Agenda details:

- I. Recap and Summary
 - a. Assessing the Hazard
- II. Assessing the Problem
 - a. Hazard Matrix
 - b. Analysis Criteria
- III. Assets
 - a. Critical Facilities
 - b. Other Assets
- IV. Vulnerability Assessment
 - a. Ranking each hazard
 - b. Probability and Vulnerability
- V. Next Steps
 - a. Next Meeting – June 17, 2019 (tentatively)
 - i. Review Vulnerability Assessment Summary
 - ii. “Set Goals” – Step 6 of 10 Step Process



Meeting Agenda

Location: City of Central Point – Sun Room

Date: June 17, 2019

Time: 2:00 PM – 3:30 PM

Agenda details:

- I. Recap and Summary
 - a. Vulnerability Assessment Summary
- II. Setting Goals
 - a. Mission Statement
 - b. Mitigation Plan Goals and Objectives
- III. Mitigation Action Items
 - a. Existing – progress
 - b. New - proposed
- IV. Next Steps
 - a. Next Meeting – July 23, 2019 (tentatively)
 - i. Review Mitigation Action Items
 - ii. “Draft an Action Plan” – Step 8 of 10 Step Process



Meeting Agenda

Location: City of Central Point – Sun Room

Date: August 6, 2019

Time: 2:00 PM – 3:00 PM

Agenda details:

I. Recap and Summary

a. Mitigation Action Items

- Timeline
- Plan Goals
- Organizations
- Funding

II. Action Prioritization

- a. Review of Benefits and Costs
- b. Assign Priority

III. Implementation

IV. Next Steps

- a. Citizen Advisory Committee – August 20th
- b. “Review the Plan” – Step 8 of 10 Step Process

Central Point Hazard Mitigation Plan Update

Advisory Committee
February 2020

Agenda

- Chapter Summary
- Risk & Risk Assessment Process
- Hazard ID & Overall Risks
- Major Changes
- Comments/Discussion
- Next Steps



Structure of Chapter

- Define Risk
- Risk Assessment Process
- Hazard Identification
 - Advisory Committee
 - Jackson County
 - Oregon DLCD
- Each Hazard:
 - Intro/Define
 - Location & Extent
 - Probability
 - Vulnerability

Risk Assessment

- What is Risk?
 - Potential for loss or damage
 - Uncontrolled or unexpected
- What is Risk Assessment?
 - Identifies overlap between hazards and assets
 - 1st step to prioritize mitigation




Identify Hazards

Planning to manage our risks



2019/2020 Hazards:

- Earthquake
- Flood
- Wildfire
- Severe Weather
 - Winter Weather
 - Wind Storms
- Drought
- Volcanic Eruptions
- Landslide

Overall Risk to Hazards

Hazard	Exposure	Vulnerability	Overall Risk	Exposure	Vulnerability	Overall Risk
Wildfire (Included in packet)	1	100	100	100	100	100
Drought	10	10	10	10	10	10
Earthquake	10	10	10	10	10	10
Floods	10	10	10	10	10	10
Other Hazards	10	10	10	10	10	10
Wildfire (Included in packet)	1	100	100	100	100	100
Drought	10	10	10	10	10	10
Earthquake	10	10	10	10	10	10
Floods	10	10	10	10	10	10
Other Hazards	10	10	10	10	10	10

2019/2020 Update – Significant Changes

Wildfire (Included in packet)

- Risk – from negligible to "High"
- Metro areas within WUI
 - Residential areas w/in 10-mile of Greenway

Other Hazards

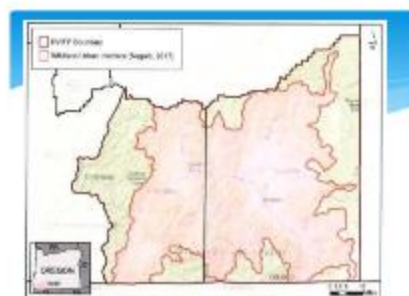
- Drought – 2014/2015 drought
- Earthquake – differentiate between Cascadia and Crustal
- Floods – LOMR 2015 & Insurance numbers

Discussion

- Risk Assessment/Hazard Summaries
- Additional comments, feedback, questions & suggestions
- Next Steps – Mitigation/Action Items

Next Steps

- Draft Mitigation Strategy & Action Items
- Timeline:
 - Advisory Committee Work Sessions
 - Planning Commission & City Council
 - FEMA & Oregon OEM
- Website Information
 - Updates, timeline, documents
 - <https://www.westvalleycommunity.gov/HazardMitigationStrategy/updates.aspx>



Vulnerability Assessment

What is at Risk?

- Community Assets
 - People
 - Economy
 - Built Environment
 - Natural Environment

Risk Analysis

Exposure Analysis

- Assets in Hazard Area
- Magnitude used to determine levels of risk

Historical Analysis

- Past Events
- Consider total losses

Scenario Analysis

- Prediction
- Low frequency events

Exposure Analysis



Asset Type	Count	Value (\$)
Residential	1,234	12,345,678
Commercial	567	5,678,901
Industrial	123	1,234,567
Public Works	456	4,567,890
Transportation	789	7,890,123
Utilities	234	2,345,678
Healthcare	101	1,012,345
Education	345	3,456,789
Government	156	1,567,890
Religious	67	678,901
Recreation	23	234,567
Other	12	123,456
Total	3,504	35,045,678



Legend:
Hazard Area
Exposure Analysis

Historical Analysis

Peminger Fire

- 97 acres burned
- 3 homes damaged
- 5 outbuildings destroyed



Scenario Analysis

Asset Category	2015 Estimated Value (\$)	2015 Asset Value (\$)
Residential	123	123
Commercial	45	45
Industrial	12	12
Public Works	123	1,234
Transportation	123	1,234
Utilities	123	1,234
Healthcare	123	1,234
Education	123	1,234
Government	123	1,234
Religious	123	1,234
Recreation	123	1,234
Other	123	1,234
Total	1,234	1,234

3

Public Meetings

The Steering Committee held public meetings on the following dates. Agendas for each of the meetings are included below.

Meeting	Meeting Topic	Meeting Date
1	Kickoff	April 9, 2019
2	Assessing the Problem/Assess the Hazard Mitigation Strategy – Create an Action Plan	Sept. 10, 2019
3	Updated hazard summary, risk assessment, vulnerability summary	Jan. 14, 2020
4	Plan Review & Implementation	October 13, 2020
5	Present draft to Planning Commission, recommendation to City Council	Nov. 3, 2020
6	City Council Study Session – introduce update	
7	City Council resolution to adopt update	



Central Point City News

April - "811" Month

In time for spring gardening and home improvement projects April is designated as "Oregon Dig Safely Month" or "811" Month. "811" is the number to call for utility locations. Calling before you begin any excavation prevents damage to underground facilities, service interruptions and bodily injury.

The Utility Notification Center is open 24 hours a day, 7 days a week. They accept calls from anyone planning to dig anywhere in the state. There is no charge for this service. Calling before digging ensures that any publicly owned underground facility is marked according to the APWA color codes so that you can dig safely. Normally locates will be done in 2 to 5 days (not including weekends and holidays) from the time you call, depending on the location. So be sure to call far enough in advance of the date you want to begin work to give

the utility companies time to complete the locates. In the event of an emergency, locates can be done sooner.

When you call you will be given a list of underground facility owners in your area along with the time schedule and a ticket number. Your ticket number is your reference number for the particular job and proof of your call to the Utility Notification Center. So remember, call "811" before you dig. Don't risk hitting a buried utility line. "It's smart, it's safe, and it's the law".



Hazard Mitigation Plan Update Meeting Announcement

Citizen Advisory Committee

Meeting Date: Tuesday April 9, 2019
Time: 6:00 p.m.
Place: 140 South 3rd Street
Central Point, OR 97502

The purpose of a hazard mitigation plan is to create a community that is resilient in the face of a natural disaster by developing an understanding of the hazards and their potential impacts. The City is updating the Natural Hazards Mitigation Plan to identify new hazards, changes to the extent of previously identified hazards, and ways to respond to disasters when they do happen.

On Tuesday, April 9th, Staff will present the Citizen Advisory Committee on the mitigation plan update process, a discussion of the plan's Mission and Goals and answer questions about the mitigation plan. The City would like your input on the mitigation plan, as well as any concerns or ideas that you have regarding the update of the existing plan. If you have any questions or would like more information, please contact the City's Floodplain Manager at (541) 664-3321 Ext. 245 or justin.gindlesperger@centralpointoregon.gov.

April, 2019

www.centralpointoregon.gov

STAFF REPORT



Planning Department

Tom Humphrey, AICP,
Community Development Director/
Assistant City Administrator

STAFF REPORT

April 9, 2019

AGENDA ITEM: VI-A

Consideration of City of Central Point Hazard Mitigation Plan **Applicant:** City of Central Point.

STAFF SOURCE:

Justin Gindlesperger, Community Planner II

BACKGROUND:

The City of Central Point has a stand-alone hazard mitigation plan that was adopted in 2011 and needs to be updated to account for community changes since 2011. The Hazard Mitigation Plan evaluates the City's vulnerability to natural hazards and establishes an action plan to reduce risk. In addition to providing a framework for reducing the negative impacts of future disaster events (i.e. floods, earthquakes, severe weather, etc.), maintaining a current plan is necessary to retain eligibility for 1) pre- and post-disaster federal funding; and 2) flood insurance discounts through the Community Rating System.

The update to the Hazard Mitigation Plan will identify new hazards, changes to the extent of previously identified hazards, and ways to respond to disasters when they do happen. This will be the first of two (2) public meetings regarding the Central Point Hazard Mitigation Plan update and is intended to ensure opportunities for citizens to be involved in the planning process throughout the update. During this meeting, staff will review and facilitate discussion of the existing plan and scope of the update with an emphasis on the following:

- Mission Statement – The mission statement states the purpose and defines the primary function of the Hazard Mitigation Plan. Does the current mission statement answer the question, “Why develop a hazard mitigation plan?”
- Goals – The goals identify priorities and specify how the City intends to work towards reducing risks. Do the goals represent the City's priorities with appropriate focus on efforts toward hazard mitigation?
- Assess the Hazards – The current plan identifies four (4) major categories: 1) Flood, 2) Earthquakes, 3) Severe Weather, and 4) Other Hazards, including volcanic activity, wildfire, landslides, and drought.
 - Does this list encompass the City's hazard information?
 - Are there other hazards that could impact the City?

Attached is a copy of Chapter 4 of the Hazard Mitigation Plan, which includes the Mission Statement and Goals. The current Hazard Mitigation Plan is available on the City's webpage (<http://www.centralpointoregon.gov/floodplain/page/hazard-mitigation-plan>) and will be available for review at the meeting upon request.

ISSUES:

The primary issue in considering the Hazard Mitigation Plan is to identify local policies and actions that can be implemented to reduce risk and future losses from hazards.


ACTION:

Consideration of the City of Central Point Hazard Mitigation Plan.

ATTACHMENTS:

Attachment “A” – Chapter 4, Central Point Hazard Mitigation Plan

Figure C.

STAFF REPORT		Planning Department Tom Humphrey, AICP, Community Development Director/ Assistant City Administrator
 STAFF REPORT September 10, 2019		
<hr/> AGENDA ITEM: VI-A <hr/>		
Consideration of City of Central Point Hazard Mitigation Plan Applicant: City of Central Point.		
<hr/> STAFF SOURCE: <hr/>		
Justin Gindlesperger, Community Planner II		
<hr/> BACKGROUND: <hr/>		
<p>The City of Central Point has a stand-alone hazard mitigation plan that was adopted in 2011 and needs to be updated to account for community changes since 2011. The Hazard Mitigation Plan evaluates the City's vulnerability to natural hazards and establishes an action plan to reduce risk. In addition to providing a framework for reducing the negative impacts of future disaster events (i.e. floods, earthquakes, severe weather, etc.), maintaining a current plan is necessary to retain eligibility for 1) pre- and post-disaster federal funding; and 2) flood insurance discounts through the Community Rating System.</p> <p>The update to the Hazard Mitigation Plan is following FEMA's 10-Step planning process to identify hazards most likely to impact Central Point. Through this process, resources and mitigation activities were identified that will prevent damage or speed recovery from natural hazards. An action plan was then developed to prioritize the activities that are most likely to prevent or mitigate losses, establishes a timeline for implementing the mitigation efforts and makes Central Point more resistant to future hazards.</p> <p>This is the second of two (2) public meetings regarding the Central Point Hazard Mitigation Plan update. At the April meeting, staff reviewed the 2011 Hazard Mitigation Plan and provided an overview of the update process. During this meeting, staff will provide an overview for each step in the planning process and facilitate discussion on the proposed updates including updated goals, vulnerability summary, and prioritization of action items. A copy of the updated Mitigation Action Plan is attached.</p> <p>The current Hazard Mitigation Plan is available on the City's webpage (http://www.centralpointoregon.gov/floodplain/page/hazard-mitigation-plan) and will be available for review at the meeting upon request.</p>		
<hr/> ISSUES: <hr/>		
The primary issue in considering the Hazard Mitigation Plan is to identify local policies and actions that can be implemented to reduce risk and future losses from hazards.		
<hr/> ACTION: <hr/>		
Consideration of the City of Central Point Hazard Mitigation Plan.		
<hr/> ATTACHMENTS: <hr/>		
Attachment "A" –Hazard Mitigation Action Plan		

STAFF REPORT



Planning Department

Tom Humphrey, AICP,
Community Development Director/
Assistant City Administrator

STAFF REPORT

September 10, 2019

AGENDA ITEM: VI-A

Consideration of City of Central Point Hazard Mitigation Plan **Applicant:** City of Central Point.

STAFF SOURCE:

Justin Gindlesperger, Community Planner II

BACKGROUND:

The City of Central Point has a stand-alone hazard mitigation plan that was adopted in 2011 and needs to be updated to account for community changes since 2011. The Hazard Mitigation Plan evaluates the City's vulnerability to natural hazards and establishes an action plan to reduce risk. In addition to providing a framework for reducing the negative impacts of future disaster events (i.e. floods, earthquakes, severe weather, etc.), maintaining a current plan is necessary to retain eligibility for 1) pre- and post-disaster federal funding; and 2) flood insurance discounts through the Community Rating System.

The update to the Hazard Mitigation Plan is following FEMA's 10-Step planning process to identify hazards most likely to impact Central Point. Through this process, resources and mitigation activities were identified that will prevent damage or speed recovery from natural hazards. An action plan was then developed to prioritize the activities that are most likely to prevent or mitigate losses, establishes a timeline for implementing the mitigation efforts and makes Central Point more resistant to future hazards.

This is the second of two (2) public meetings regarding the Central Point Hazard Mitigation Plan update. At the April meeting, staff reviewed the 2011 Hazard Mitigation Plan and provided an overview of the update process. During this meeting, staff will provide an overview for each step in the planning process and facilitate discussion on the proposed updates including updated goals, vulnerability summary, and prioritization of action items. A copy of the updated Mitigation Action Plan is attached.

The current Hazard Mitigation Plan is available on the City's webpage (<http://www.centralpointoregon.gov/floodplain/page/hazard-mitigation-plan>) and will be available for review at the meeting upon request.

ISSUES:

The primary issue in considering the Hazard Mitigation Plan is to identify local policies and actions that can be implemented to reduce risk and future losses from hazards.

ACTION:

Consideration of the City of Central Point Hazard Mitigation Plan.

ATTACHMENTS:

Attachment "A" –Hazard Mitigation Action Plan

Hazard Mitigation Website

The Steering Committee maintained a website to provide information about the hazard mitigation plan update process. This website includes an overview of hazard mitigation, how the planning process works, meeting times, agendas and relevant information about the Central Point Hazard Mitigation Plan.

The web page is maintained by the project manager and modified as the project progresses towards completion.



City of Central Point, Oregon

HAZARD MITIGATION PLAN



Hazard mitigation planning is essential to identifying and implementing actions to reduce damages from future disasters. As a citizen and/or business owner, you are invited to participate in the 5-year update of Central Point Natural Hazard Mitigation Plan. By keeping this plan current, the City remains eligible for pre- and post-disaster funding and the current flood insurance discount provided through the Community Rating System.

Plan Overview

The Central Point Hazard Mitigation Plan was adopted by the City Council in 2011. The plan identifies natural hazards that could impact the City, evaluates risk of damages to the community and establishes a prioritized action plan to reduce hazard impacts over time. Maintaining a current hazard mitigation plan maintains the City's eligibility for federal disaster assistance, and earns points toward flood insurance discounts through the National Flood Insurance Program (NFIP) Community Rating System (CRS). At this time, the City has earned a 20% automatic discount for Central Point policies in the high risk floodplain and a 10% discount for policies within low to moderate risk flood zones.

Advisory Committee/Public Participation

At this time, the City is completing its 5-year mitigation plan update. The planning process is guided by the Steering Committee, which is comprised of individuals representing the following stakeholder groups:

- City of Central Point Community Development (i.e. Planning & Building)
- City of Central Point Parks & Public Works Department
- City of Central Point Police Department/CERT Coordinator
- Fire District #3
- Pacific Power & Light
- School District 6
- Chamber of Commerce
- Central Point Floodplain Resident


The Steering Committee will meet 4-5 times during the planning period. Public participation is important to this planning process. You are invited to attend the Steering Committee and public meetings (dates and times posted below). In addition, you may post comments, suggestions and questions to this web page in the "Post Comments" section below.

Planning Process & Schedule

Meeting	Date	Planning Objectives
Steering Committee Meeting #1	April 2, 2019 at 2:00 p.m. Central Point City Hall - Sun Room	Review planning objectives and review the plan mission, action items and natural hazards. Identify any new sources of information regarding hazards from technical reports, agencies that should be reviewed.

Public Meeting #1	April 9, 2019 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present the 2011 Hazard Mitigation Plan, present the plan update process, opportunities for public involvement, receive input/feedback on mission, goals, and specific hazards of concern.
Steering Committee Meeting # 2	May 20, 2019 Central Point City Hall - Sun Room	Discuss any new information received through technical reports, identify critical facilities and assets and discuss hazard matrix/ranking.
Steering Committee Meeting #3	June 17, 2019 Central Point City Hall--Sun Room	Review hazard vulnerability and ranking of risks, review goals and objectives to determine they address the hazards and risks.
Steering Committee Meeting #4	August 7, 2019 Central Point City Hall--Sun Room	Review and prioritize mitigation actions in the context of HMAC goals and costs-benefits analysis.
Public Meeting # 2	Sept. 10, 2019 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present progression of update process, review hazards, vulnerability summary and mitigation action plan items to ensure they address the hazards and risks.
Public Meeting # 3	Jan. 14, 2020 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present Citizen Advisory Committee with updated hazard summary and risk assessment, vulnerability summary.
Public Meeting # 4	Feb. 4, 2020 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present Planning Commission with progression of update process and review updated hazard summary and risk assessment chapter.
Steering Committee Meeting # 5	Sept. 29, 2020 Central Point City Hall--Sun Room	Review the final draft plan. Complete the FEMA Crosswalk, establish timeline for adoption.
Public Meeting # 5	Oct. 13, 2020 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present draft to Citizen Advisory Committee, review the plan mission, goals and action items. Opportunities for public involvement, comments and feedback.
Public Meeting # 6	Nov. 03, 2020 at 6:00 p.m. City Council Chambers 140 South 3rd Street Central Point, OR 97502	Present draft to Planning Commission, review the plan mission, goals and action items. Opportunities for public involvement, comments and feedback.
City Council Meeting Study Session	TBD	Present the updated Hazard Mitigation Plan, address any questions
City Council Meeting	TBD	Resolution to Adopt the Plan following FEMA approval.

Supporting Documents

-  2011 Central Point Hazard Mitigation Plan (23 MB)
-  Public Meeting # 1 Agenda Item - 04-09-2019 (228 KB)
-  Public Meeting # 2 Agenda Item - 09/10/2019 (500 KB)
-  Public Meeting # 3 Agenda Item - 01/14/2020 (1 MB)
-  Public Meeting # 4 Agenda Item - 02/04/2020 (2 MB)



Add new comment

Your name

Appendix D. Critical Facilities













Map 3
City of Central Point
Pre-Disaster Mitigation

Critical Facilities

Legend

Critical Facilities

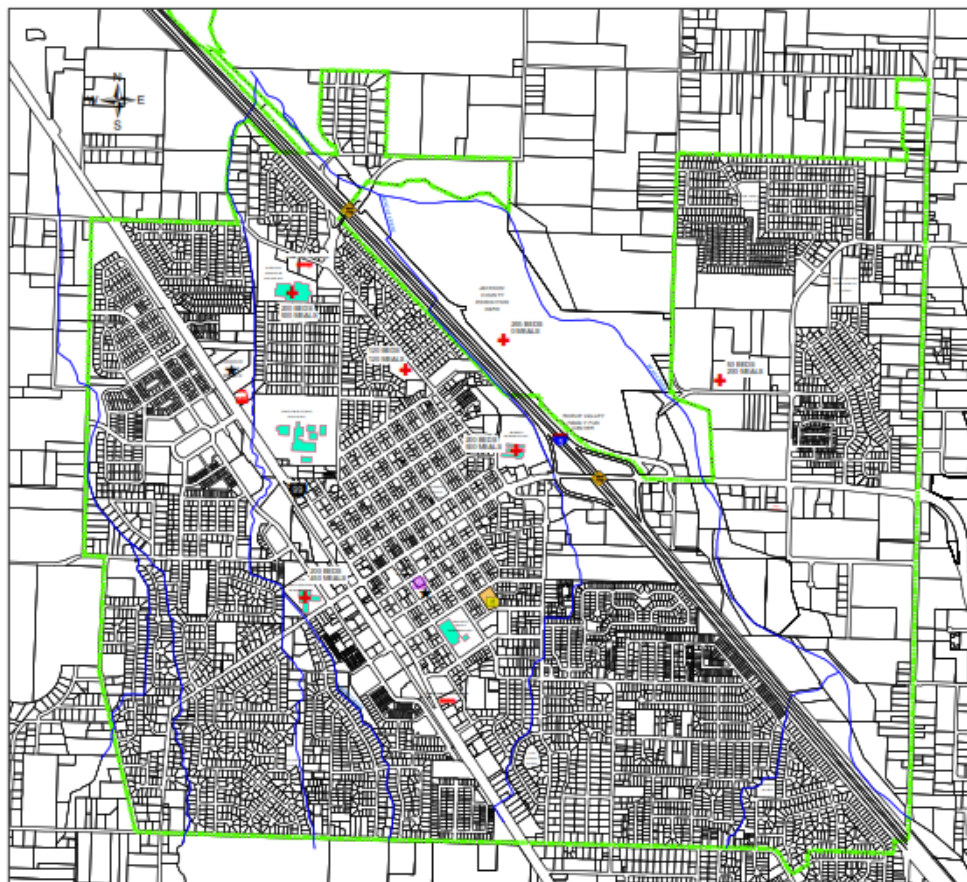
Facility

-  Bridge
-  City Hall
-  Fire Department
-  Law Enforcement
-  PPL Substation
-  Red Cross Shelters
-  Water Pump Station
-  UGB
-  School Buildings
-  Public Works Facilities

This map is intended
for graphic display and
planning purposes only.
Source:
City of Central Point GIS,
Jackson County Smartmap

MHO REVISED
23 SEPT 2020

0 500 1,000 2,000 3,000 Feet



Critical Facilities.mxd

Facility Name	Address	Facility Type	Hazard Risk	Source
Central Point City Hall/ City Police Dept.	140 S. 3 rd Street	Administration/ Emergency Services	None	City of Central Point
Central Point Public Works	399 S. 5 th Street	Support/ Emergency Services	None	City of Central Point
Central Point Elementary	450 S. 4 th Street	School	High Seismic Risk	School District # 7
Crater High School	655 N. 3 rd Street	School	1% Annual Chance Flood	School District # 7
Jewett Elementary	1001 Manzanita Street	School/ Red Cross Shelter	None	School District # 7
Mae Richardson Elementary	200 W. Pine Street	School/ Red Cross Shelter	1% Annual Chance Flood	School District # 7/ City of Central Point
Scenic Middle School	1955 Scenic Avenue	School/ Red Cross Shelter	None	School District # 7
Fire Station – Scenic Ave.	1909 Scenic Avenue	Emergency Services	None	Fire District # 3
Fire Station – S. Front Street	600 S. Front Street	Emergency Services	None	Fire District # 3
Oregon State Police	4500 Rogue Valley Hwy	Emergency Services	0.2% Annual Chance Flood	OSP/ Central Point
Jackson County Expo	1 Peninger Road	Red Cross Shelter	1% Annual Chance Flood	Jackson County/ City of Central Point
Shepherd of the Valley	600 Beebe Road	Red Cross Shelter/ Child Care	None	Shepherd of the Valley Catholic Church
Upton Road Overpass	--	Infrastructure – bridge		City of Central Point Public Works
E. Pine Street/Biddle Road Overpass	--	Infrastructure - bridge		ODOT/Central Point Public Works
PPL Substation	4485 Rogue Valley Hwy	Utilities – Electric substation	0.2% Annual Chance Flood	Pacific Power & Light